

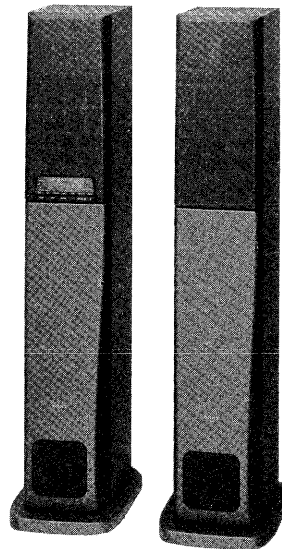
SA-VA1

SERVICE MANUAL

*US Model
Canadian Model
AEP Model
UK Model*



• REAR SPEAKER



• FRONT SPEAKER SYSTEM

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

For front full range/center woofer speakers: with 4 ohm loads, both channels driven, from 40 Hz -20 kHz; rated 18 watts per channel minimum RMS power, with no more than 0.8 % total harmonic distortion from 250 milliwatts to rated output.

Other specifications

Amplifier section

Continuous RMS power output
total 100 W
Center tweeter: 17 W (4 ohms at 10 kHz, 10% THD)
Front full range/center woofer :22 W + 22 W
(4 ohms at 1 kHz, 10% THD)
Super woofer: 22 W (4 ohms at 40 Hz, 10% THD)
Rear: 17 W (4 ohms at 1 kHz, 10% THD)

Input sensitivity/impedance

INPUT 1/2: 450 mV, 50 k Ω

Output

INPUT 1/2: 450 mV, 1 k Ω
Center: 650 mV, 2 k Ω
Rear: Accept only supplied rear speakers SS-SR11
R-ch: Accept only SA-VA1 R-ch speaker with supplied front L/R speaker connecting cord

Tone control

Front/center

Bass: ± 10 dB at 100 Hz

Treble: ± 10 dB at 10 kHz

Super woofer

+10 dB at 30 Hz in MOVIE mode

Speaker section

Type

Front speaker system

Bassreflex type

DBR super woofer

SAW type

Rear speaker

Bassreflex type

Speaker unit

Front speaker system

Center tweeter: 5 cm cone type (x2)

Front full range/center woofer: 10 cm cone type (x2)

Super woofer: 13 cm cone type (x2)

Rear speaker

8 cm cone type (x2)

— Continued on next page —

HOME THEATER ACTIVE SPEAKER SYSTEM

SONY®



使用時は添付資料も参照のこと
Refer to the additional documents.

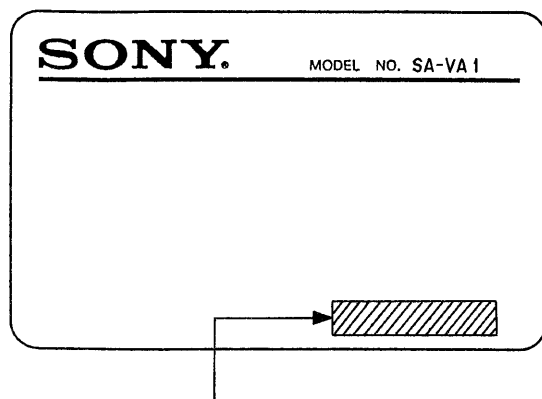
General

Power requirement	120 V AC, 60 Hz (US, Canadian model) 220 — 230 V 50/60 Hz (AEP, German model) 240 V 50/60 Hz (UK model)
Power consumption	60 W
Dimensions	Approx. 180 × 1040 × 305 mm (w/h/d) (7 ¹ / ₈ × 41 × 12 inches) Approx. 240 × 1040 × 370 mm (w/h/d, including speaker base) (9 ¹ / ₂ × 41 × 14 ⁵ / ₈ inches)
Mass	Front (L): 16 kg (35 lb 3 oz) Front (R): 13 kg (28 lb 9 oz) Rear: 800 g/pc (1 lb 12 oz)
Supplied accessories	Front L/R speaker connecting cord, 3.5 m (1) Rear speaker connecting cord, 10 m (2) Audio connecting cord, 1.5 m (1) Remote commander RM-VA1 (1) Sony batteries SUM-3 (NS) (2)

Design and specifications are subject to change without notice.

MODEL IDENTIFICATION

— Specification Label —



4-967-779-□□ : US, Canadian model
4-969-066-□□ : AEP model
4-969-067-□□ : UK model
4-970-046-□□ : German model

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY MARK Δ OR DOTTED LINE WITH MARK Δ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SERVICE MODE

If turning the power on and no sound is maintained, the power is shut off after operating the auto switch off. When you measure a voltage measurement, etc., perform the measurements after SERVICE MODE according as the following methods.

1. Turn the power on.
2. Short-circuit the S763 land on the SW BOARD momentarily before operating the auto switch off function. ("AUTO SW ON" on the indicator tube is indicated.)
3. Short-circuit the S764 land on the SW BOARD momentarily. ("ALL ON" on the indicator tube is indicated.) On this condition, measure a voltage measurement.
Note: When turning the power off, returning to the normal condition.

TEST MODE

This mode all lights the indicator tube.

1. Turn the power on.
2. Short-circuit the S763 land on the SW BOARD momentarily before operating the auto switch off function. ("AUTO SW ON" on the indicator tube is indicated.)
3. Short-circuit the S765 land on the SW BOARD momentarily.
(The indicator tube is all lit.)
Note: When turning the power off, returning to the normal condition.

* Manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under one or more of the following patents: U.S number 3,959,590; Canadian numbers 1,004,603 and 1,037,877. "Dolby", "Pro Logic", and the double-D symbol $\square\square$ are trademarks of Dolby Laboratories Licensing Corporation.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE Δ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

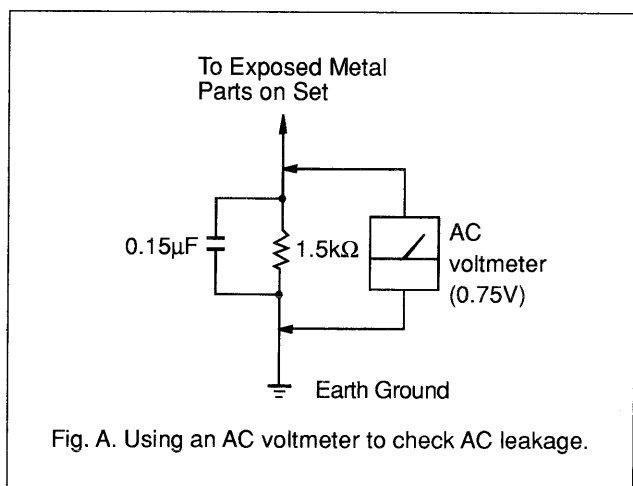


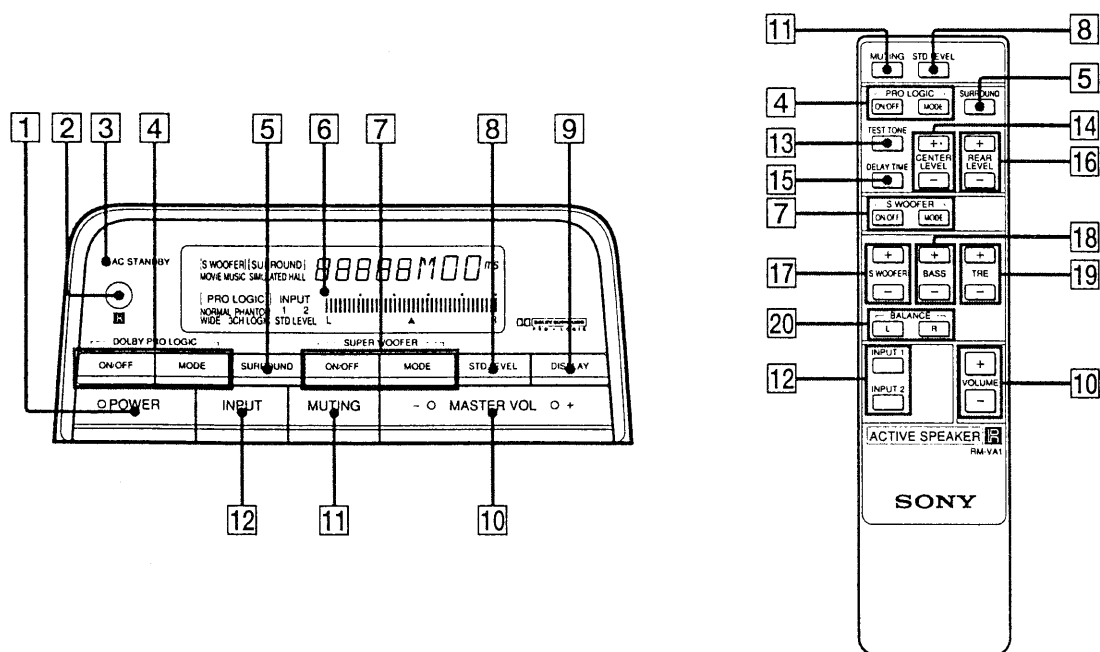
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SECTION 1 GENERAL

This section is extracted from instruction manual.

Left-speaker operation panel/remote commander

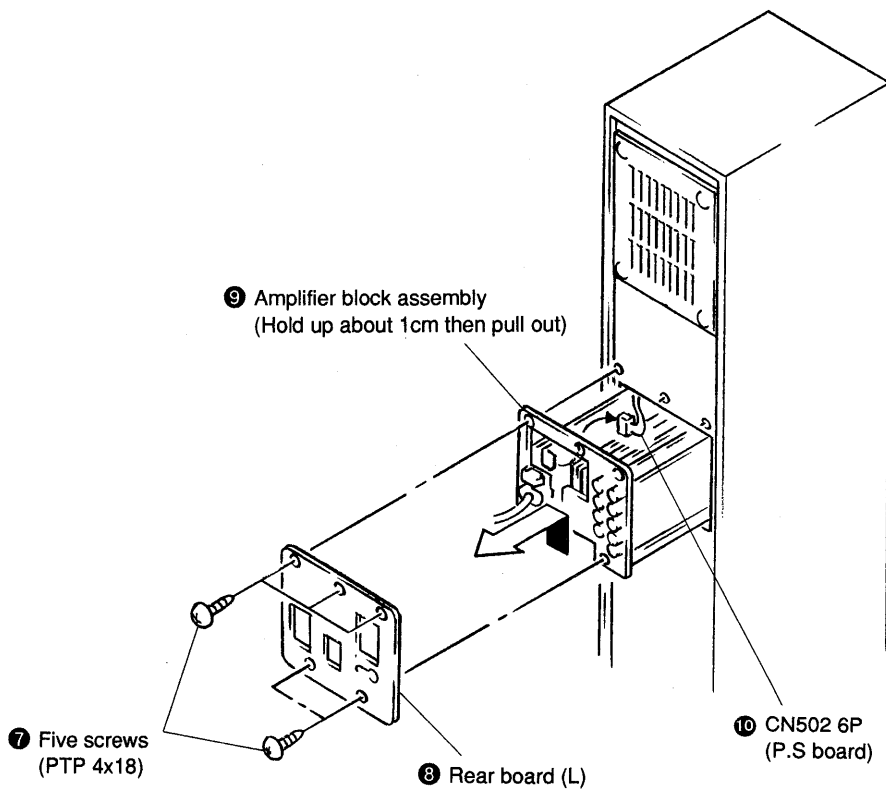
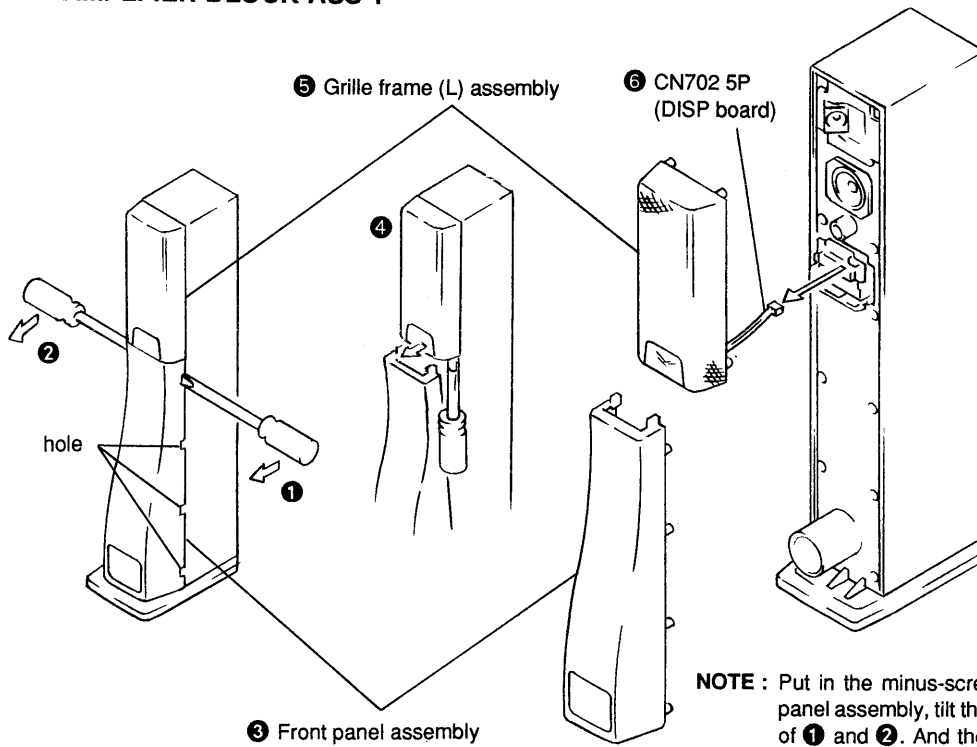


For details, refer to the page number(s) indicated in parentheses.

- 1 POWER switch
- 2 Remote sensor
- 3 AC STANDBY indicator
This indicator lights up when the system is connected to an AC outlet and the system is in STANDBY mode.
- 4 DOLBY PRO LOGIC ON/OFF button
DOLBY PRO LOGIC MODE button (pages 11 and 14)
- 5 SURROUND button (page 11)
- 6 Display
- 7 SUPER WOOFER ON/OFF button
SUPER WOOFER MODE button (page 11)
- 8 STD (standard) LEVEL button (page 13)
- 9 DISPLAY button (page 11)
- 10 MASTER VOL (VOLUME) +/- button(s) (pages 11 and 12)
- 11 MUTING button (page 11)
- 12 INPUT (1/2) button(s) (page 10)
- 13 TEST TONE button (pages 12 and 13)
- 14 CENTER LEVEL +/- buttons (pages 12 and 13)
- 15 DELAY TIME button (page 13)
- 16 REAR LEVEL +/- buttons (pages 12 and 13)
- 17 S.WOOFER +/- buttons (page 12)
- 18 BASS +/- buttons (page 12)
- 19 TRE (treble) +/- buttons (page 12)
- 20 BALANCE L/R buttons (page 13)

SECTION 2 DISASSEMBLY

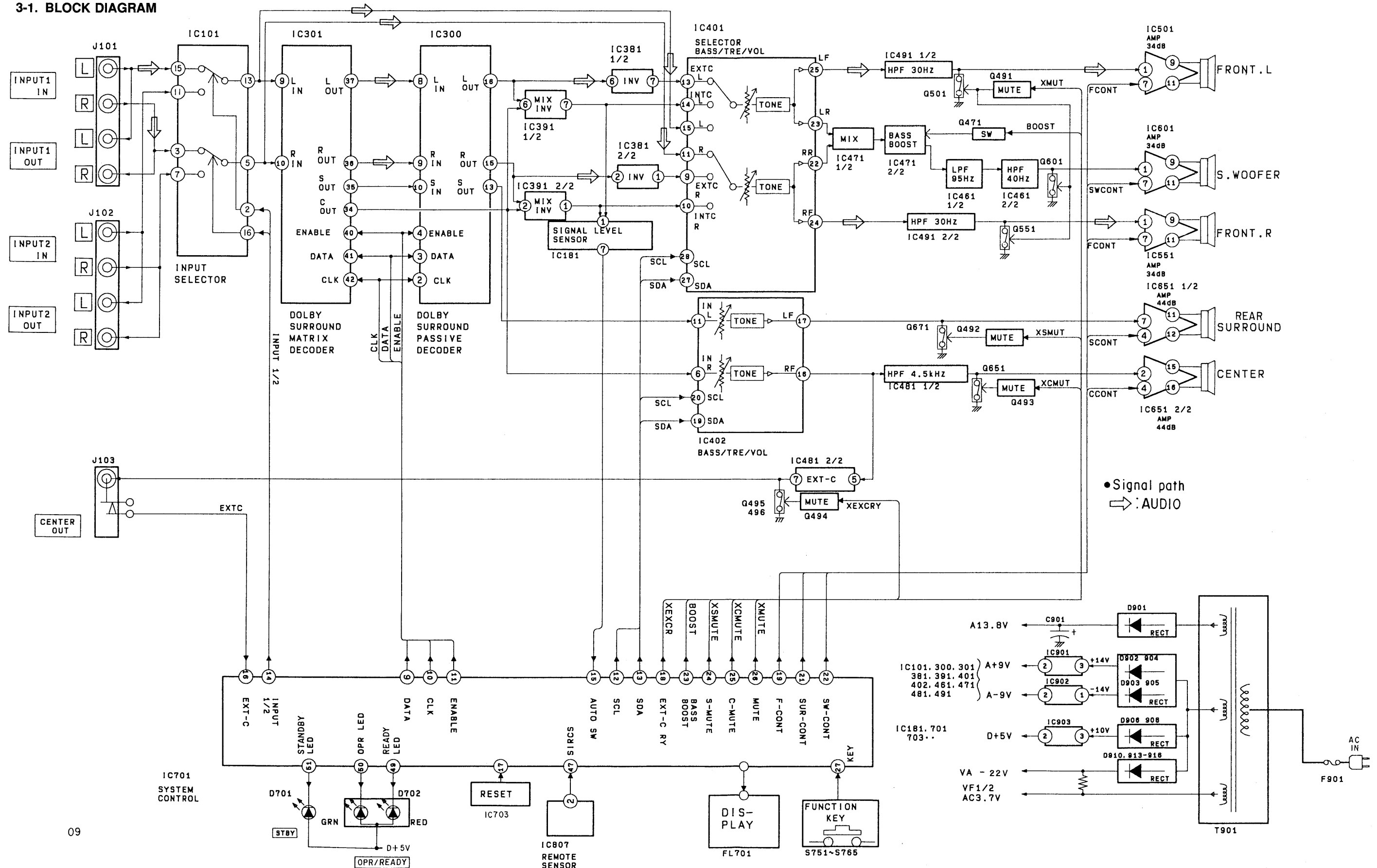
2-1. AMPLIFIER BLOCK ASS'Y



SECTION 3

DIAGRAMS

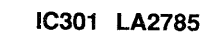
3-1. BLOCK DIAGRAM



Ref. No.	Location
D461	G-12
D701	G-9
D702	A-1
IC101	B-4
IC181	A-9
IC300	D-8
IC301	C-6
IC381	B-8
IC391	A-8
IC401	C-10
IC402	B-9
IC461	G-12
IC471	G-12
IC481	B-11
IC491	D-11
IC701	G-7
IC702	G-9
IC703	G-5
Q471	F-12
Q491	B-12
Q492	A-11
Q493	A-11
Q494	A-11
Q495	A-10
Q496	A-10

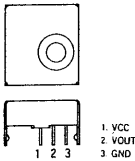
-  : parts extracted from the component side.
-  : Through hole.
-  : internal component.
-  : parts mounted on the conductor side.
-  : Pattern from the side which enable seeing.
-  : Pattern of the rear side.



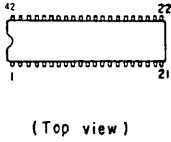


SEMICONDUCTOR LEAD LAYOUTS

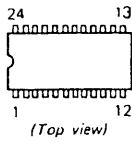
GP1U59XB



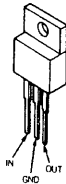
LA2785



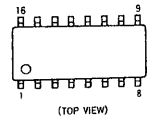
LV1010N



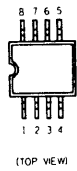
M5F78M05L
M5F79M09L
NJM78M09FA



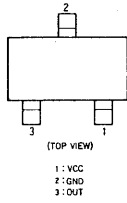
NJM2123M-T1



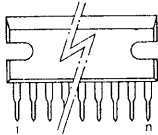
NJM4560M
NJM2072M



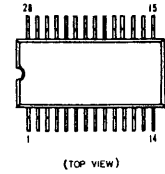
PST572CMT



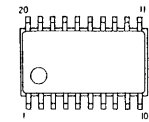
TA8221AL
 μ PC2505H (1)



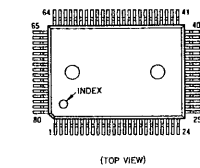
TDA7313D013TR



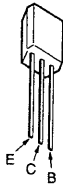
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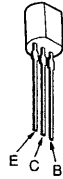
μ PD78042GF-085-3B9



2SA1344
2SC3622A-LK



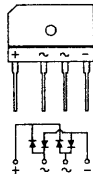
2SB1116



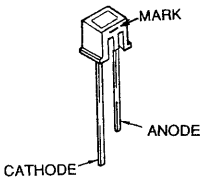
2SC3624-L18
2SC4154



RBV2506



SEL5221S-TH8C

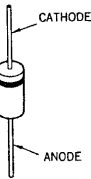


SML16760CN-TP4

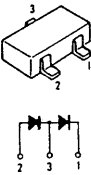


1: Anode Yellow green
2: Cathode Common
3: Anode Red

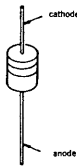
UZ-5.1BSC
UZ-36BSB



1SS226



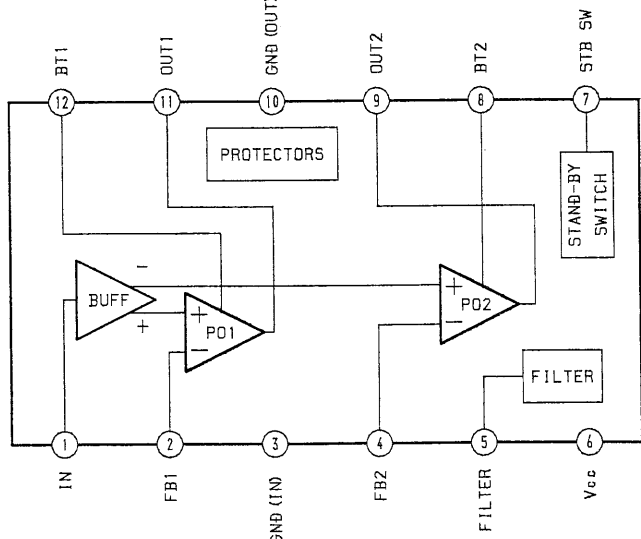
11ES2



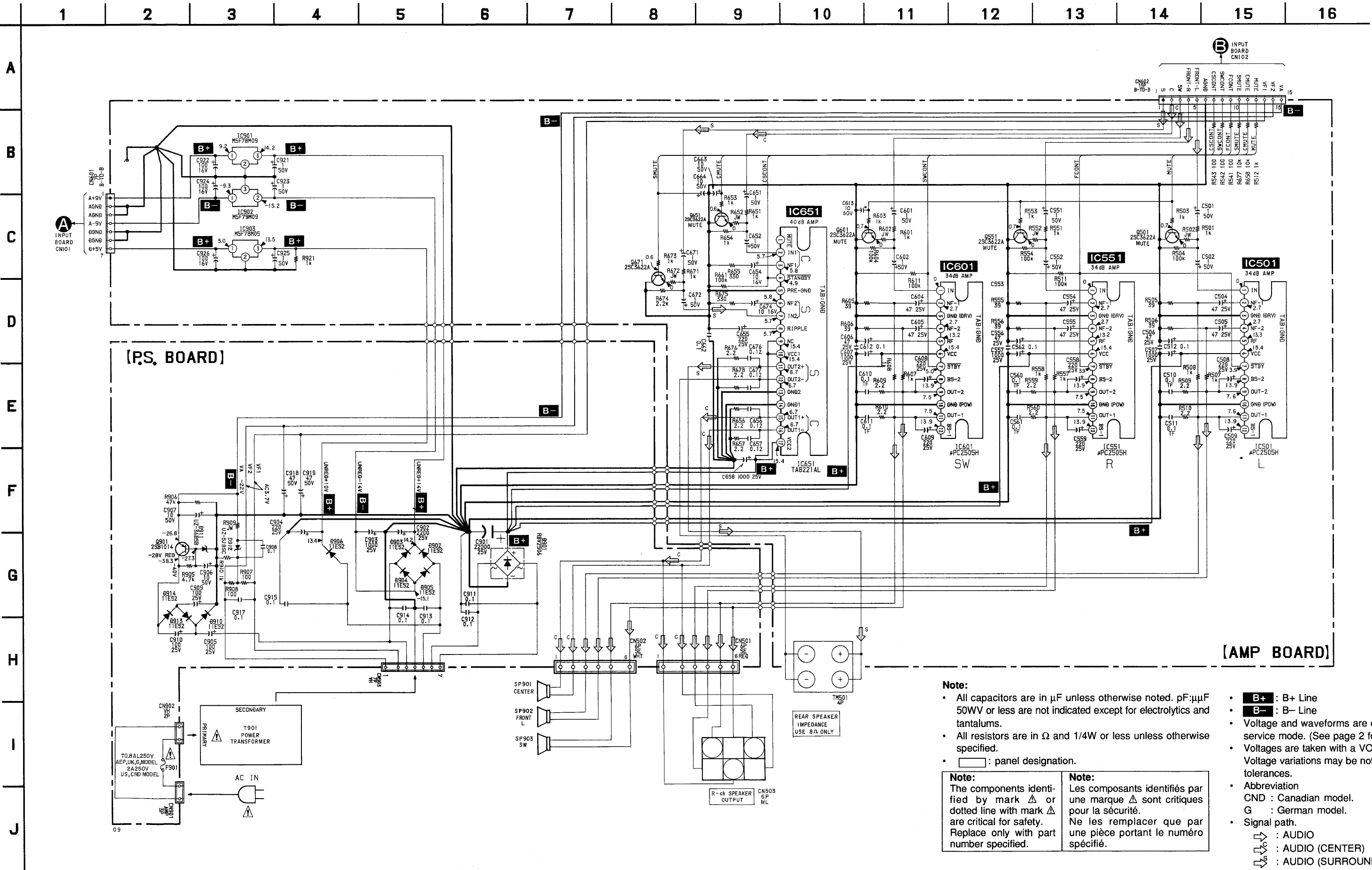
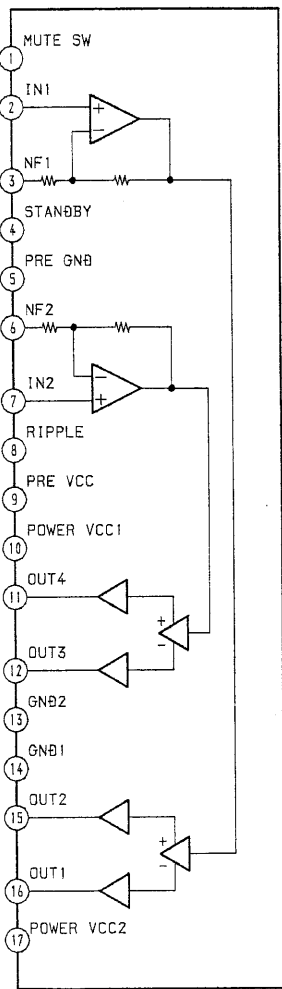
3-4. SCHEMATIC DIAGRAM — AMP SECTION —

• IC Block Diagrams.

IC501, 551, 601 μ PC2505H



IC651 TA8221AL



Note:

- All capacitors are in μ F unless otherwise noted. pF: μ F 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- : panel designation.

Note:

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

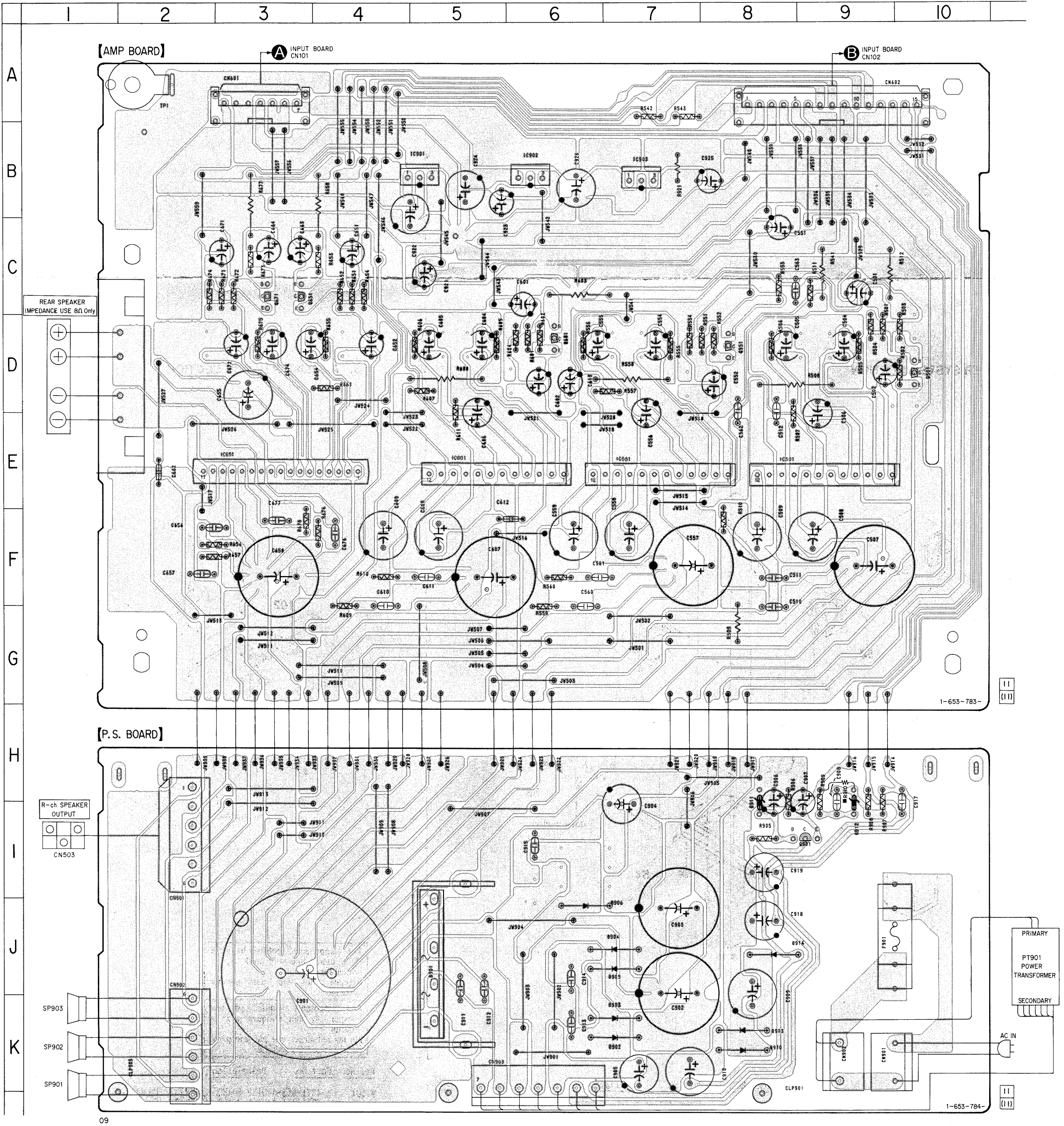
Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

• **B+** : B+ Line
• **B-** : B- Line
• Voltage and waveforms are dc with respect to ground in service mode. (See page 2 for setup of service mode.)
• Voltages are taken with a VOM (Input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
• Abbreviation
CND : Canadian model.
G : German model.
• Signal path.
→ : AUDIO
→ : AUDIO (CENTER)
→ : AUDIO (SURROUND)

3-5. PRINTED WIRING BOARDS — AMP SECTION —
• See page 15 for Semiconductor Lead Layouts.

• Semiconductor Location

Ref. No.	Location
D901	J-6
D902	K-8
D903	K-8
D904	J-8
D905	J-8
D906	J-7
D910	K-9
D911	I-9
D912	I-10
D913	K-9
D914	J-9
IC501	E-9
IC551	E-8
IC601	E-6
IC651	E-4
IC901	B-6
IC902	B-7
IC903	B-8
Q501	D-11
Q551	D-9
Q601	D-7
Q651	C-4
Q671	C-4
Q901	I-10



Note:
• ○ : parts extracted from the component side.
• ■ : parts mounted on the conductor side.
• □ : Pattern from the side which enable seeing.

3-6. IC PIN FUNCTIONS

• IC701 System Control IC (μ PD78042GF-085-3B9)

Pin No.	Pin Name	I/O	Function
1 to 7	7G to 1G	O	FL grid control
8	VDD	—	Power supply terminal (+5V)
9	DATA	O	Dolby IC (IC300, 301) serial control
10	CLK	O	
11	ENABLE	O	Electrical volume IC (IC401, 402) serial control
12	SCL	O	
13	SDA	O	Input select control (L: input 2 H: input 1)
14	INPUT 1/2	O	
15	AUTO SW	I	Audio signal detection (L: Sound input H: No sound input)
16	EXT C	I	Connecting detection of external center output (L: Connecting signal input H: No connecting signal input)
17	RESET	I	System reset
18	EXT-C RY	O	Muting control of external center output (L: Mute)
19	F-CONT	O	Power AMP standby control (H: on L: Standby)
20	AVSS	—	GND for A/D convertor
21	SUR-CONT	O	Power AMP standby control (H: on L: Standby)
22	SW-CONT	O	
23	BASS BOOST	O	Bass boost control (H: off L: on)
24	S-MUTE	O	Mute control (L: Mute)
25	C-MUTE	O	
26	MUTE	O	Key input (analog)
27	KEY 0	I	
28	KEY 1	I	Key input (open)
29	AVDD	—	Analog power supply for A/D convertor
30	AVREF	—	Reference voltage for A/D convertor
31	I (NC)	—	Not used (Connected to GND)
32	XT2	—	Not used (open)
33	VSS	—	GND
34	X1	I	Oscillation crystal (4.19 MHz) for main system clock
35	X2	O	
36 to 46	I (NC)	—	Not used (Connected to GND)
47	SIRCS	I	Remote control signal input
48	IC	—	Internal connecting (Connected to GND)
49	READY LED	O	LED control (L: Lighting)
50	OPR LED	O	
51	STANDBY LED	O	Power supply (+5V)
52	VDD	—	
53 to 70	S24 to S27	O	FL segment control
71	VLOAD	—	Power supply (-22V) for indication control
72 to 77	S6 to S1	O	FL segment control
78 to 80	10G to 8G	O	FL grid control

SECTION 4

EXPLODED VIEWS

NOTE:

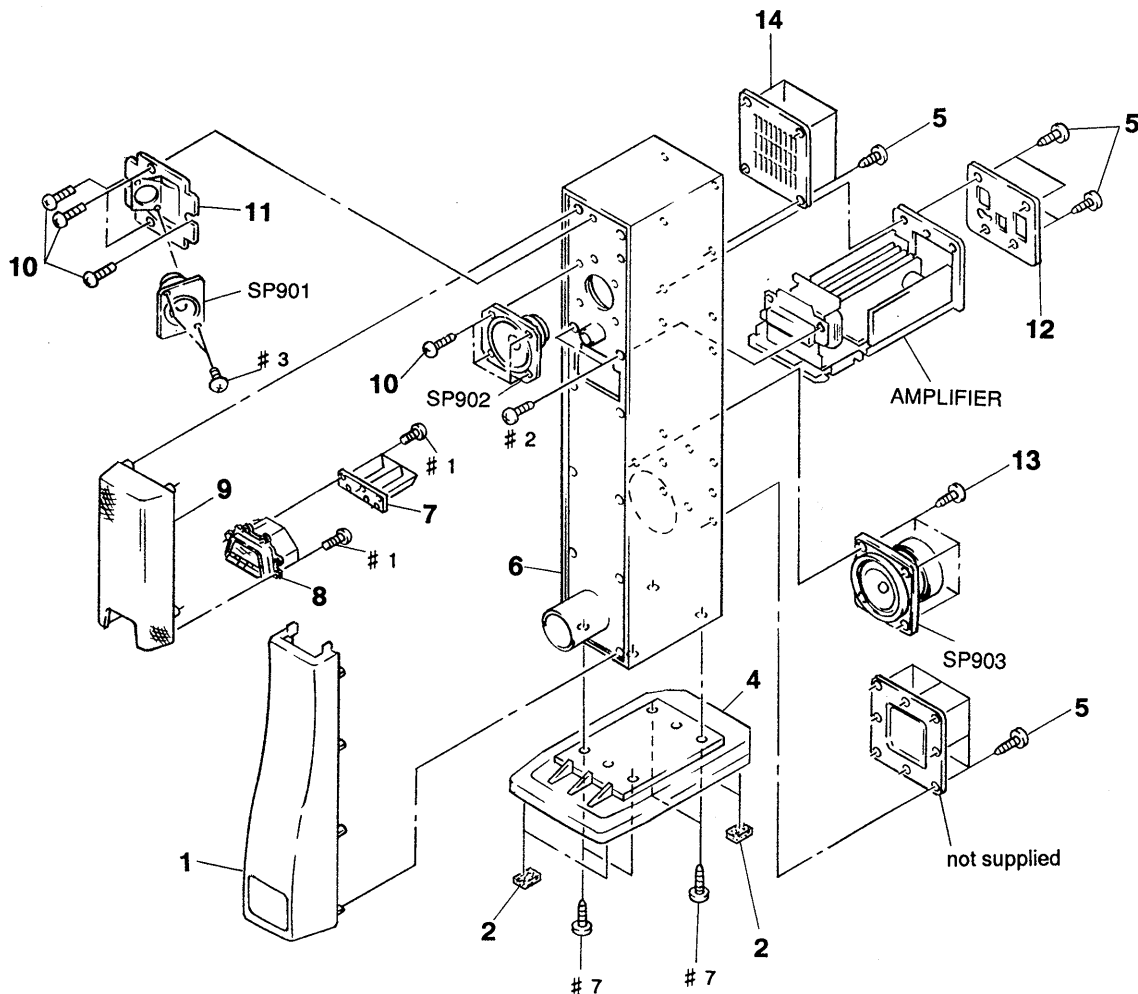
- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some difference from the original one.

- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
CND : Canadian model
G : German model

The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

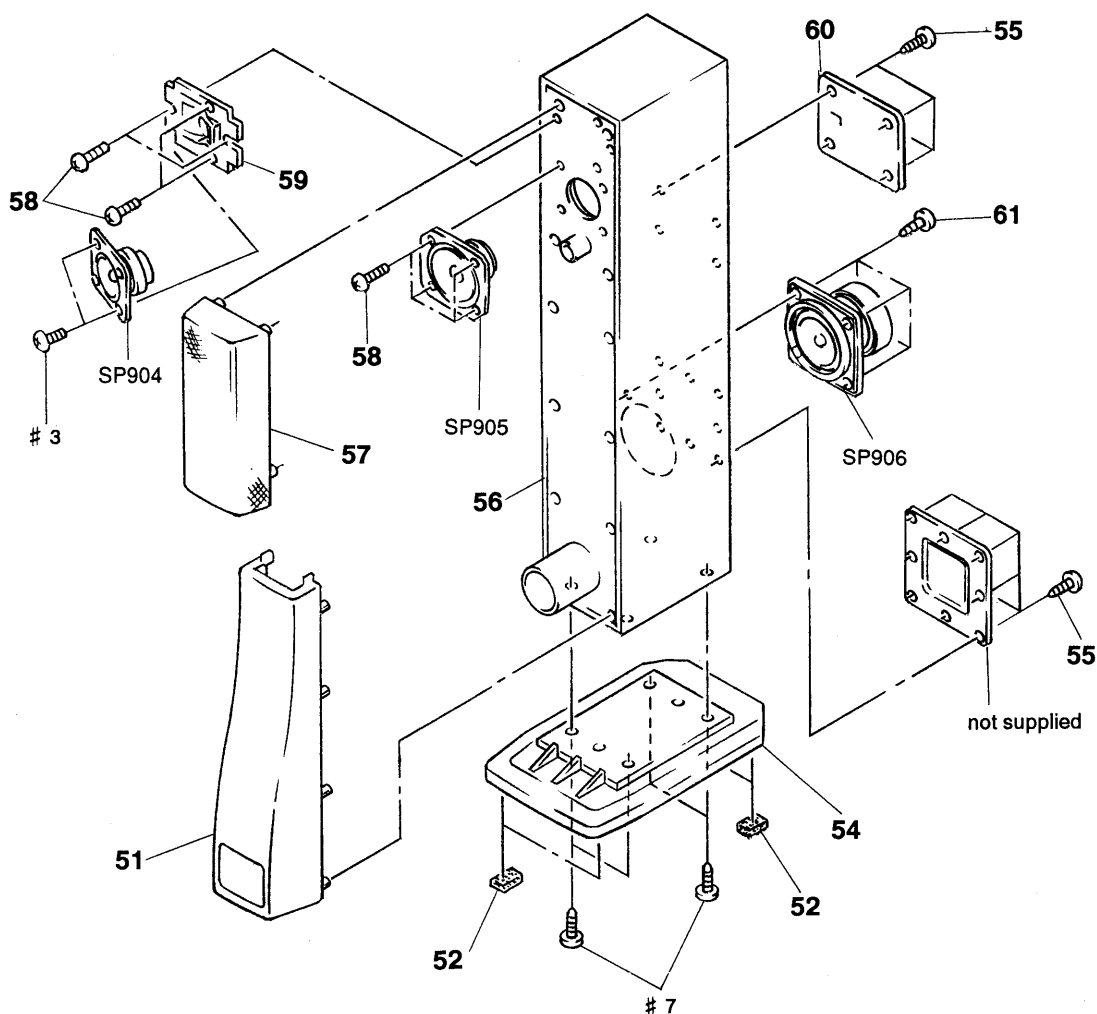
Les composants identifiés par une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

4-1. L SPEAKER SYSTEM SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-4945-062-2	PANEL ASSY, FRONT		* 11	4-967-609-01	FRAME, TWEETER	
2	4-967-287-01	CUSHION (A)		* 12	4-967-276-03	BOARD (L), REAR (US, CND)	
4	4-967-271-01	BASE		* 12	4-967-276-13	BOARD (L), REAR (AEP, G)	
5	4-964-851-01	SCREW (4X18), (+) P TAPPING		* 12	4-967-276-23	BOARD (L), REAR (UK)	
* 6	X-4945-238-3	CABINET (L) ASSY, SPEAKER (AEP, G)		13	4-907-233-11	SCREW (4X25), (+) (B) TAPPING	
* 6	X-4945-041-3	CABINET (L) ASSY, SPEAKER (US, CND, UK)		* 14	4-967-274-02	LID (RADIATION)	
* 7	1-653-780-11	SW BOARD		SP901	1-504-276-11	SPEAKER (5CM) (CENTER TWEETER)	
8	X-4945-039-3	PANEL ASSY, CONTROL		SP902	1-504-632-11	SPEAKER (10CM)	
9	X-4945-043-3	FRAME (L) ASSY, GRILLE				(FRONT FULL RANGE/CENTER WOOFER)	
10	4-914-518-11	SCREW (4X14), (+) (B) TAPPING		SP903	1-504-631-11	SPEAKER (13CM) (SUPER WOOFER)	

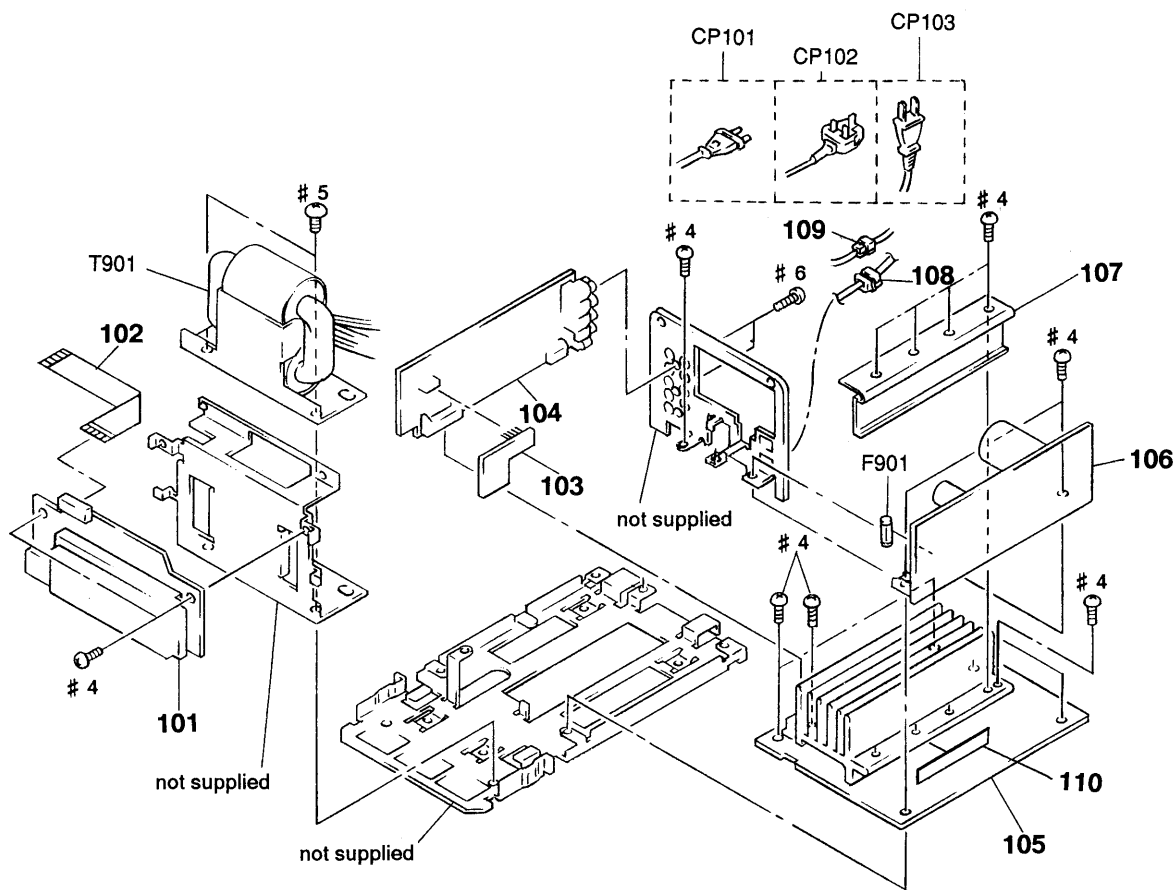
4-2. R SPEAKER SYSTEM SECTION



<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>R</u>
51	X-4945-062-2	PANEL ASSY, FRONT	
52	4-967-287-01	CUSHION (A)	
54	4-967-271-01	BASE	
55	4-964-851-01	SCREW (4X18), (+) P TAPPING	
* 56	X-4945-042-3	CABINET (R) ASSY, SPEAKER (US, CND, UK)	
* 56	X-4945-239-3	CABINET (R) ASSY, SPEAKER (AEP, G)	
57	X-4945-044-3	FRAME (R) ASSY, GRILLE	
58	4-914-518-11	SCREW (4X14), (+) (B) TAPPING	

<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
	* 59	4-967-609-01	FRAME, TWEETER	
	* 60	4-967-277-03	BOARD (R), REAR	
K)	* 61	4-907-233-11	SCREW (4X25), (+) (B) TAPPING	
	SP904	1-504-276-11	SPEAKER (5CM) (CENTER TWEETER)	
	SP905	1-504-632-11	SPEAKER (10CM)	
			(FRONT FULL RANGE/CENTER WOOFER)	
	SP906	1-504-631-11	SPEAKER (13CM) (SUPER WOOFER)	

4-3. AMPLIFIER BLOCK SECTION

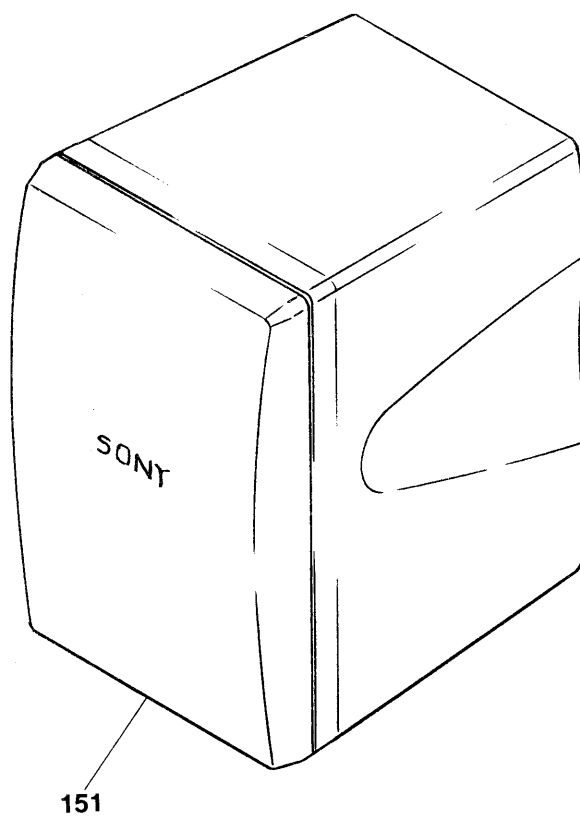


The components identified by mark ▲ or dotted line with mark ▲ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ▲ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 101	A-4371-668-A	DISP BOARD, COMPLETE (US, CND, AEP, UK)		* 109	3-703-244-00	BUSHING (2104), CORD (AEP, UK, G)	
* 101	A-4371-711-A	DISP BOARD, COMPLETE (G)		110	4-968-980-01	SHEET INSULATING	
102	1-765-690-11	WIRE (FLAT TYPE) (21 CORE)		▲CP101	1-575-651-21	CORD, POWER (AEP, G)	
* 103	1-653-782-11	FILTER BOARD		▲CP102	1-696-571-11	CORD, POWER (UK)	
* 104	A-4371-670-A	INPUT BOARD, COMPLETE (US, CND, AEP, UK)		▲CP103	1-690-958-11	CORD, POWER (US, CND)	
* 104	A-4371-713-A	INPUT BOARD, COMPLETE (G)		▲F901	1-532-215-00	TIME LAG FUSE T0.8A 250V (AEP, UK, G)	
* 105	A-4371-672-A	AMP BOARD, COMPLETE (US, CND, AEP, UK)		▲F901	1-576-104-11	FUSE 2A 250V (US, CND)	
* 105	A-4371-715-A	AMP BOARD, COMPLETE (G)		▲T901	1-426-987-11	TRANSFORMER, POWER (US, CND)	
* 106	1-653-784-11	P.S. BOARD		▲T901	1-426-988-11	TRANSFORMER, POWER (AEP, G)	
* 107	4-967-247-01	HOLDER, IC		▲T901	1-426-989-11	TRANSFORMER, POWER (UK)	
108	4-916-783-01	BUSHING, CORD (US, CND)					

4-4. REAR SPEAKER SYSTEM SECTION
(SS-SR11)



<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
151	A-4361-136-A	SYSTEM ASSY (US)	
151	A-4361-137-A	SYSTEM ASSY (CND, AEP, UK, G)	

SECTION 5

ELECTRICAL PARTS LIST

NOTE:

The components identified by mark Δ or dotted line with mark Δ are critical for safety.

Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité.

Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

• Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.

• Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• -XX, -X mean standardized parts, so they may have some difference from the original one.

• Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

• Abbreviation

CND : Canadian model

G : German model

• RESISTORS

All resistors are in ohms

METAL: Metal-film resistor

METAL OXIDE: Metal Oxide-film resistor

F : nonflammable

• SEMICONDUCTORS

In each case, u: μ , for example:

uA...: μ A..., uPA...: μ PA..., uPB...: μ PB...,

uPC...: μ PC..., uPD...: μ PD...

• CAPACITORS

uF : μ F

• COILS

uH : μ H

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-4371-672-A	AMP BOARD, COMPLETE (US, CND, AEP, UK)		C651	1-124-791-11	ELECT	1.0uF 20% 100V
	*****			C652	1-124-791-11	ELECT	1.0uF 20% 100V
*	A-4371-715-A	AMP BOARD, COMPLETE (G)		C654	1-124-915-11	ELECT	10uF 20% 63V
	*****			C655	1-124-911-11	ELECT	220uF 20% 50V
*	4-870-539-00	PLATE, GROUND		C656	1-136-166-00	FILM	0.12uF 5% 50V
		< CAPACITOR >		C657	1-136-166-00	FILM	0.12uF 5% 50V
C501	1-124-791-11	ELECT	1.0uF 20% 100V	C658	1-124-557-11	ELECT	1000uF 20% 25V
C502	1-124-791-11	ELECT	1.0uF 20% 100V	C662	1-164-159-11	CERAMIC	0.1uF 50V
C504	1-124-910-11	ELECT	47uF 20% 50V	C663	1-124-907-11	ELECT	10uF 20% 50V
C505	1-124-910-11	ELECT	47uF 20% 50V	C664	1-124-907-11	ELECT	10uF 20% 50V
C506	1-124-910-11	ELECT	47uF 20% 50V	C671	1-124-791-11	ELECT	1.0uF 20% 100V
C507	1-124-557-11	ELECT	1000uF 20% 25V	C672	1-124-791-11	ELECT	1.0uF 20% 100V
C508	1-124-911-11	ELECT	220uF 20% 50V	C674	1-124-915-11	ELECT	10uF 20% 63V
C509	1-124-911-11	ELECT	220uF 20% 50V	C676	1-136-166-00	FILM	0.12uF 5% 50V
C510	1-136-165-00	FILM	0.1uF 5% 50V	C677	1-136-166-00	FILM	0.12uF 5% 50V
C511	1-136-165-00	FILM	0.1uF 5% 50V	C921	1-124-791-11	ELECT	1.0uF 20% 100V
C512	1-136-165-00	FILM	0.1uF 5% 50V	C922	1-124-122-11	ELECT	100uF 20% 50V
C551	1-124-791-11	ELECT	1.0uF 20% 100V	C923	1-124-791-11	ELECT	1.0uF 20% 100V
C552	1-124-791-11	ELECT	1.0uF 20% 100V	C924	1-124-122-11	ELECT	100uF 20% 50V
C554	1-124-910-11	ELECT	47uF 20% 50V	C925	1-124-791-11	ELECT	1.0uF 20% 100V
C555	1-124-910-11	ELECT	47uF 20% 50V	C926	1-124-122-11	ELECT	100uF 20% 50V
C556	1-124-910-11	ELECT	47uF 20% 50V			< CONNECTOR >	
C557	1-124-557-11	ELECT	1000uF 20% 25V	* CN601	1-569-493-11	SOCKET, CONNECTOR 7P	
C558	1-124-911-11	ELECT	220uF 20% 50V	CN602	1-573-095-11	SOCKET, CONNECTOR 15P	
C559	1-124-911-11	ELECT	220uF 20% 50V			< IC >	
C560	1-136-165-00	FILM	0.1uF 5% 50V	IC501	8-759-195-91	IC uPC2505H(1)	
C561	1-136-165-00	FILM	0.1uF 5% 50V	IC551	8-759-195-91	IC uPC2505H(1)	
C562	1-136-165-00	FILM	0.1uF 5% 50V	IC601	8-759-195-91	IC uPC2505H(1)	
C601	1-124-791-11	ELECT	1.0uF 20% 100V	IC651	8-759-287-75	IC TA8221AL	
C602	1-124-791-11	ELECT	1.0uF 20% 100V	IC901	8-759-701-59	IC NJM78M09FA	
C604	1-124-910-11	ELECT	47uF 20% 50V	IC902	8-759-604-43	IC M5F79M09L	
C605	1-124-910-11	ELECT	47uF 20% 50V	IC903	8-759-604-35	IC M5F78M05L	
C606	1-124-910-11	ELECT	47uF 20% 50V			< TRANSISTOR >	
C607	1-124-557-11	ELECT	1000uF 20% 25V	Q501	8-729-141-26	TRANSISTOR 2SC3622A-LK	
C608	1-124-911-11	ELECT	220uF 20% 50V	Q551	8-729-141-26	TRANSISTOR 2SC3622A-LK	
C609	1-124-911-11	ELECT	220uF 20% 50V	Q601	8-729-141-26	TRANSISTOR 2SC3622A-LK	
C610	1-136-165-00	FILM	0.1uF 5% 50V	Q651	8-729-141-26	TRANSISTOR 2SC3622A-LK	
C611	1-136-165-00	FILM	0.1uF 5% 50V	Q671	8-729-141-26	TRANSISTOR 2SC3622A-LK	
C612	1-164-159-11	CERAMIC	0.1uF 50V				
C613	1-124-907-11	ELECT	10uF 20% 50V				

AMP**DISP**

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
< RESISTOR >							R675	1-249-411-11	CARBON	330	5%	1/4W	
R501	1-249-417-11	CARBON	1K	5%	1/4W	F	R676	1-249-385-11	CARBON	2.2	5%	1/6W	F
R502	1-216-295-00	METAL CHIP	0	5%	1/10W		R677	1-249-429-11	CARBON	10K	5%	1/4W	
R503	1-249-417-11	CARBON	1K	5%	1/4W	F	R678	1-249-385-11	CARBON	2.2	5%	1/6W	F
R504	1-249-441-11	CARBON	100K	5%	1/4W		R909	1-216-295-00	METAL CHIP	0	5%	1/10W	
R505	1-249-400-11	CARBON	39	5%	1/4W	F	R921	1-249-417-11	CARBON	1K	5%	1/4W	F
							< TERMINAL >						
R506	1-249-400-11	CARBON	39	5%	1/4W	F	* TM501 1-537-240-41 TERMINAL BOARD (CHECKER PIN) (REAR SPEAKER)						
R507	1-249-417-11	CARBON	1K	5%	1/4W	F							
R508	1-249-417-11	CARBON	1K	5%	1/4W	F	*****						
R509	1-249-385-11	CARBON	2.2	5%	1/6W	F	* A-4371-668-A DISP BOARD, COMPLETE (US, CND, AEP, UK) *****						
R510	1-249-385-11	CARBON	2.2	5%	1/6W	F							
							* A-4371-711-A DISP BOARD, COMPLETE (G) *****						
R511	1-249-441-11	CARBON	100K	5%	1/4W		4-967-269-02 HOLDER, INDICATION TUBE						
R512	1-249-417-11	CARBON	1K	5%	1/4W	F							
R541	1-247-807-31	CARBON	100	5%	1/4W		< CAPACITOR >						
R542	1-247-807-31	CARBON	100	5%	1/4W		C701	1-124-584-00	ELECT	100uF	20%	10V	
R543	1-247-807-31	CARBON	100	5%	1/4W		C702	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
							C704	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
R551	1-249-417-11	CARBON	1K	5%	1/4W	F	C705	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
R552	1-216-295-00	METAL CHIP	0	5%	1/10W		C706	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
R553	1-249-417-11	CARBON	1K	5%	1/4W	F	C707	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
R554	1-249-441-11	CARBON	100K	5%	1/4W		C708	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
R555	1-249-400-11	CARBON	39	5%	1/4W	F	C709	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
							C710	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
R556	1-249-400-11	CARBON	39	5%	1/4W	F	C711	1-124-248-00	ELECT	22uF	20%	35V	
R557	1-249-417-11	CARBON	1K	5%	1/4W	F	C712	1-124-248-00	ELECT	22uF	20%	35V	
R558	1-249-417-11	CARBON	1K	5%	1/4W	F	< CONNECTOR >						
R559	1-249-385-11	CARBON	2.2	5%	1/6W	F	CN701	1-691-651-11	SOCKET, CONNECTOR 21P				
R560	1-249-385-11	CARBON	2.2	5%	1/6W	F	* CN702	1-564-339-00	PIN, CONNECTOR 5P				
							< DIODE >						
R601	1-249-417-11	CARBON	1K	5%	1/4W	F	D701	8-719-046-46	DIODE	SEL5221S-TH8C (STBY)			
R602	1-216-295-00	METAL CHIP	0	5%	1/10W		< FLUORESCENT INDICATOR >						
R603	1-249-417-11	CARBON	1K	5%	1/4W	F	FL701	1-517-328-11	INDICATOR TUBE, FLUORESCENT				
R604	1-249-441-11	CARBON	100K	5%	1/4W		< CINOISUTUIB CURCYUT >						
R605	1-249-400-11	CARBON	39	5%	1/4W	F	IB701	1-239-729-11	COMPOSITION CIRCUIT BLOCK				
R606	1-249-400-11	CARBON	39	5%	1/4W	F	IB702	1-239-729-11	COMPOSITION CIRCUIT BLOCK				
R607	1-249-417-11	CARBON	1K	5%	1/4W	F	< IC >						
R608	1-249-417-11	CARBON	1K	5%	1/4W	F	IC701	8-759-287-77	IC	uPD78042GF-085-3B9			
R609	1-249-385-11	CARBON	2.2	5%	1/6W	F							
R610	1-249-385-11	CARBON	2.2	5%	1/6W	F							
R611	1-249-441-11	CARBON	100K	5%	1/4W								
R651	1-249-417-11	CARBON	1K	5%	1/4W	F							
R652	1-216-295-00	METAL CHIP	0	5%	1/10W								
R653	1-249-417-11	CARBON	1K	5%	1/4W	F							
R654	1-249-417-11	CARBON	1K	5%	1/4W	F							
R655	1-249-411-11	CARBON	330	5%	1/4W								
R656	1-249-385-11	CARBON	2.2	5%	1/6W	F							
R657	1-249-385-11	CARBON	2.2	5%	1/6W	F							
R658	1-249-429-11	CARBON	10K	5%	1/4W								
R661	1-249-441-11	CARBON	100K	5%	1/4W								
R671	1-249-417-11	CARBON	1K	5%	1/4W	F							
R672	1-216-295-00	METAL CHIP	0	5%	1/10W								
R673	1-249-417-11	CARBON	1K	5%	1/4W	F							
R674	1-249-421-11	CARBON	2.2K	5%	1/4W	F							

DISP

FILTER

INPUT

Ref.No.	Part No.	Description	Remark
IC702	8-749-923-43	IC GPIU57XB	
IC703	8-759-518-38	IC PST572CMT	
< COIL >			
L701	1-410-470-11	INDUCTOR 10uH	
< RESISTOR >			
R701	1-216-105-00	METAL CHIP 220K 5% 1/10W	
R711	1-216-025-00	METAL CHIP 100 5% 1/10W	
R712	1-216-025-00	METAL CHIP 100 5% 1/10W	
R713	1-216-025-00	METAL CHIP 100 5% 1/10W	
R714	1-216-025-00	METAL CHIP 100 5% 1/10W	
R715	1-216-025-00	METAL CHIP 100 5% 1/10W	
R716	1-216-025-00	METAL CHIP 100 5% 1/10W	
R717	1-216-025-00	METAL CHIP 100 5% 1/10W	
R718	1-216-025-00	METAL CHIP 100 5% 1/10W	
R719	1-216-025-00	METAL CHIP 100 5% 1/10W	
R720	1-216-025-00	METAL CHIP 100 5% 1/10W	
R721	1-216-025-00	METAL CHIP 100 5% 1/10W	
R722	1-216-025-00	METAL CHIP 100 5% 1/10W	
R723	1-216-025-00	METAL CHIP 100 5% 1/10W	
R724	1-216-025-00	METAL CHIP 100 5% 1/10W	
R725	1-216-025-00	METAL CHIP 100 5% 1/10W	
R726	1-216-025-00	METAL CHIP 100 5% 1/10W	
R741	1-216-029-00	METAL CHIP 150 5% 1/10W	
R742	1-216-029-00	METAL CHIP 150 5% 1/10W	
R743	1-216-034-00	METAL CHIP 240 5% 1/10W	
R750	1-216-025-00	METAL CHIP 100 5% 1/10W	
R751	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
R771	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
< VIBRATOR >			
X701	1-567-775-11	VIBRATOR, CERAMIC (4.19MHz)	

*	1-653-782-11	FILTER BOARD	

< CAPACITOR >			
C451	1-136-169-00	FILM 0.22uF 5% 50V	
C452	1-136-169-00	FILM 0.22uF 5% 50V	
C461	1-124-927-11	ELECT 4.7uF 20% 100V	
C462	1-136-165-00	FILM 0.1uF 5% 50V	
C463	1-136-169-00	FILM 0.22uF 5% 50V	
C471	1-136-173-00	FILM 0.47uF 5% 50V	
C472	1-136-173-00	FILM 0.47uF 5% 50V	
C474	1-124-927-11	ELECT 4.7uF 20% 100V	
C488	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C489	1-163-038-00	CERAMIC CHIP 0.1uF 25V	

Ref.No.	Part No.	Description	Remark
< CONNECTOR >			
* CN402	1-508-695-00	CONNECTOR PIN 6P	
< DIODE >			
D461	8-719-800-76	DIODE 1SS226	
< IC >			
IC461	8-759-745-64	IC NJM4560M	
IC471	8-759-745-64	IC NJM4560M	
< TRANSISTOR >			
Q471	8-729-602-21	TRANSISTOR 2SC4154	
< RESISTOR >			
R451	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R452	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R460	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R461	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R462	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R463	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R464	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R465	1-216-091-00	METAL CHIP 56K 5% 1/10W	
R471	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R472	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R473	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R474	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R475	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	

*	A-4371-670-A	INPUT BOARD, COMPLETE (US, CND, AEP, UK)	

*	A-4371-713-A	INPUT BOARD, COMPLETE (G)	

< CAPACITOR >			
C101	1-124-791-11	ELECT 1.0uF 20% 100V	
C102	1-124-791-11	ELECT 1.0uF 20% 100V	
C103	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C104	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C105	1-124-927-11	ELECT 4.7uF 20% 100V	
C121	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C122	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C123	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C124	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C125	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C126	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C127	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C128	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	

INPUT

Ref.No.	Part No.	Description			Remark	Ref.No.	Part No.	Description			Remark
C129	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	C345	1-136-165-00	FILM	0.1uF	5%	50V
C181	1-163-033-00	CERAMIC CHIP	0.022uF		50V	C346	1-123-379-00	ELECT	0.47uF	20%	50V
C182	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	C347	1-124-927-11	ELECT	4.7uF	20%	100V
C183	1-124-903-11	ELECT	1uF	20%	50V	C348	1-123-379-00	ELECT	0.47uF	20%	50V
C184	1-163-038-00	CERAMIC CHIP	0.1uF		25V	C349	1-124-927-11	ELECT	4.7uF	20%	100V
C190	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	C350	1-136-167-00	FILM	0.15uF	5%	50V
C201	1-124-791-11	ELECT	1.0uF	20%	100V	C351	1-126-111-11	ELECT	3.3uF	20%	50V
C202	1-124-791-11	ELECT	1.0uF	20%	100V	C352	1-136-167-00	FILM	0.15uF	5%	50V
C205	1-124-927-11	ELECT	4.7uF	20%	100V	C358	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C301	1-124-915-11	ELECT	10uF	20%	63V	C383	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C302	1-126-335-11	ELECT	220uF	20%	10V	C384	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C303	1-136-159-00	FILM	0.033uF	5%	50V	C391	1-124-927-11	ELECT	4.7uF	20%	100V
C304	1-130-473-00	MYLAR	0.0015uF	5%	50V	C392	1-124-927-11	ELECT	4.7uF	20%	100V
C305	1-136-159-00	FILM	0.033uF	5%	50V	C393	1-124-927-11	ELECT	4.7uF	20%	100V
C306	1-124-791-11	ELECT	1.0uF	20%	100V	C394	1-124-927-11	ELECT	4.7uF	20%	100V
C307	1-124-915-11	ELECT	10uF	20%	63V	C395	1-124-927-11	ELECT	4.7uF	20%	100V
C308	1-124-915-11	ELECT	10uF	20%	63V	C401	1-126-233-11	ELECT	22uF	20%	50V
C309	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	C402	1-130-476-00	MYLAR	0.0027uF	5%	50V
C310	1-124-927-11	ELECT	4.7uF	20%	100V	C403	1-130-476-00	MYLAR	0.0027uF	5%	50V
C311	1-124-925-11	ELECT	2.2uF	20%	100V	C404	1-136-165-00	FILM	0.1uF	5%	50V
C312	1-164-232-11	CERAMIC CHIP	0.01uF		50V	C405	1-136-165-00	FILM	0.1uF	5%	50V
C313	1-163-038-00	CERAMIC CHIP	0.1uF		25V	C406	1-136-165-00	FILM	0.1uF	5%	50V
C314	1-126-335-11	ELECT	220uF	20%	10V	C407	1-136-165-00	FILM	0.1uF	5%	50V
C315	1-136-159-00	FILM	0.033uF	5%	50V	C410	1-124-927-11	ELECT	4.7uF	20%	100V
C316	1-124-915-11	ELECT	10uF	20%	63V	C411	1-124-927-11	ELECT	4.7uF	20%	100V
C317	1-126-101-11	ELECT	100uF	20%	16V	C412	1-124-925-11	ELECT	2.2uF	20%	100V
C318	1-130-469-00	MYLAR	680PF	5%	50V	C413	1-124-925-11	ELECT	2.2uF	20%	100V
C322	1-124-927-11	ELECT	4.7uF	20%	100V	C418	1-126-101-11	ELECT	100uF	20%	16V
C323	1-136-173-00	FILM	0.47uF	5%	50V	C419	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C324	1-124-910-11	ELECT	47uF	20%	50V	C438	1-126-101-11	ELECT	100uF	20%	16V
C325	1-136-165-00	FILM	0.1uF	5%	50V	C439	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C326	1-136-165-00	FILM	0.1uF	5%	50V	C441	1-126-233-11	ELECT	22uF	20%	50V
C327	1-123-379-00	ELECT	0.47uF	20%	50V	C442	1-130-476-00	MYLAR	0.0027uF	5%	50V
C328	1-124-927-11	ELECT	4.7uF	20%	100V	C443	1-130-476-00	MYLAR	0.0027uF	5%	50V
C329	1-123-379-00	ELECT	0.47uF	20%	50V	C444	1-136-165-00	FILM	0.1uF	5%	50V
C330	1-124-927-11	ELECT	4.7uF	20%	100V	C445	1-136-165-00	FILM	0.1uF	5%	50V
C331	1-136-167-00	FILM	0.15uF	5%	50V	C446	1-136-165-00	FILM	0.1uF	5%	50V
C332	1-126-111-11	ELECT	3.3uF	20%	50V	C447	1-136-165-00	FILM	0.1uF	5%	50V
C333	1-136-167-00	FILM	0.15uF	5%	50V	C449	1-124-927-11	ELECT	4.7uF	20%	100V
C334	1-136-157-00	FILM	0.022uF	5%	50V	C481	1-130-479-00	MYLAR	0.0047uF	5%	50V
C335	1-136-161-00	FILM	0.047uF	5%	50V	C482	1-130-479-00	MYLAR	0.0047uF	5%	50V
C336	1-126-335-11	ELECT	220uF	20%	10V	C485	1-124-927-11	ELECT	4.7uF	20%	100V
C337	1-124-915-11	ELECT	10uF	20%	63V	C486	1-124-927-11	ELECT	4.7uF	20%	100V
C338	1-124-915-11	ELECT	10uF	20%	63V	C491	1-136-165-00	FILM	0.1uF	5%	50V
C339	1-124-915-11	ELECT	10uF	20%	63V	C492	1-136-165-00	FILM	0.1uF	5%	50V
C340	1-124-915-11	ELECT	10uF	20%	63V	C493	1-136-165-00	FILM	0.1uF	5%	50V
C341	1-126-335-11	ELECT	220uF	20%	10V	C494	1-136-165-00	FILM	0.1uF	5%	50V
C342	1-126-111-11	ELECT	3.3uF	20%	50V	< CONNECTOR >					
C343	1-126-111-11	ELECT	3.3uF	20%	50V	* CN101	1-569-502-11	PIN, CONNECTOR 7P			
C344	1-136-165-00	FILM	0.1uF	5%	50V						

INPUT

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
CN102	1-573-109-11	PIN, CONNECTOR 15P		R192	1-216-025-00	METAL CHIP	100 5% 1/10W
* CN103	1-568-864-11	SOCKET, CONNECTOR 21P		R193	1-216-025-00	METAL CHIP	100 5% 1/10W
CN401	1-766-554-11	HOUSING, CONNECTOR 6P		R194	1-216-025-00	METAL CHIP	100 5% 1/10W
< IC >				R195	1-216-025-00	METAL CHIP	100 5% 1/10W
IC101	8-759-287-76	IC NJM2123M-T1		R196	1-216-025-00	METAL CHIP	100 5% 1/10W
IC181	8-759-701-51	IC NJM2072M		R197	1-216-025-00	METAL CHIP	100 5% 1/10W
IC300	8-759-168-98	IC LV1010N		R198	1-216-025-00	METAL CHIP	100 5% 1/10W
IC301	8-759-248-74	IC LA2785		R199	1-216-025-00	METAL CHIP	100 5% 1/10W
IC381	8-759-745-64	IC NJM4560M		R200	1-216-073-00	METAL CHIP	10K 5% 1/10W
IC391	8-759-745-64	IC NJM4560M		R201	1-216-049-00	METAL CHIP	1K 5% 1/10W
IC401	8-759-169-92	IC TDA7313D013TR		R202	1-216-049-00	METAL CHIP	1K 5% 1/10W
IC402	8-759-273-12	IC TDA7315D013TR		R203	1-216-049-00	METAL CHIP	1K 5% 1/10W
IC481	8-759-745-64	IC NJM4560M		R204	1-216-049-00	METAL CHIP	1K 5% 1/10W
IC491	8-759-745-64	IC NJM4560M		R205	1-216-089-00	METAL GLAZE	47K 5% 1/10W
< JACK >				R206	1-216-089-00	METAL GLAZE	47K 5% 1/10W
J101	1-695-188-11	JACK, PIN 4P (INPUT 1)		R207	1-249-441-11	CARBON	100K 5% 1/10W
J102	1-695-188-11	JACK, PIN 4P (INPUT 2)		R300	1-216-121-00	METAL CHIP	1M 5% 1/10W
J103	1-766-580-11	PIN, JACK (CENTER OUT)		R301	1-216-037-00	METAL CHIP	330 5% 1/10W
< COIL >				R302	1-216-079-00	METAL CHIP	18K 5% 1/10W
L301	1-410-470-11	INDUCTOR 10uH		R306	1-216-689-11	METAL CHIP	39K 0.5% 1/10W
L302	1-410-470-11	INDUCTOR 10uH		R307	1-216-689-11	METAL CHIP	39K 0.5% 1/10W
< TRANSISTOR >				R308	1-216-049-00	METAL CHIP	1K 5% 1/10W
Q491	8-729-805-65	TRANSISTOR 2SA1344		R383	1-216-073-00	METAL CHIP	10K 5% 1/10W
Q492	8-729-805-65	TRANSISTOR 2SA1344		R384	1-216-073-00	METAL CHIP	10K 5% 1/10W
Q493	8-729-805-65	TRANSISTOR 2SA1344		R385	1-216-073-00	METAL CHIP	10K 5% 1/10W
Q494	8-729-805-65	TRANSISTOR 2SA1344		R386	1-216-073-00	METAL CHIP	10K 5% 1/10W
Q495	8-729-107-43	TRANSISTOR 2SC3624-L18		R387	1-216-073-00	METAL CHIP	10K 5% 1/10W
Q496	8-729-107-43	TRANSISTOR 2SC3624-L18		R388	1-216-073-00	METAL CHIP	10K 5% 1/10W
< RESISTOR >				R391	1-216-073-00	METAL CHIP	10K 5% 1/10W
R101	1-216-049-00	METAL CHIP	1K 5% 1/10W	R392	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
R102	1-216-049-00	METAL CHIP	1K 5% 1/10W	R393	1-216-073-00	METAL CHIP	10K 5% 1/10W
R103	1-216-049-00	METAL CHIP	1K 5% 1/10W	R394	1-216-073-00	METAL CHIP	10K 5% 1/10W
R104	1-216-049-00	METAL CHIP	1K 5% 1/10W	R395	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
R105	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R396	1-216-073-00	METAL CHIP	10K 5% 1/10W
R106	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R397	1-216-073-00	METAL CHIP	10K 5% 1/10W
R107	1-216-097-00	METAL CHIP	100K 5% 1/10W	R398	1-216-073-00	METAL CHIP	10K 5% 1/10W
R109	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R401	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
R110	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R402	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
R181	1-216-081-00	METAL CHIP	22K 5% 1/10W	R441	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
R182	1-216-081-00	METAL CHIP	22K 5% 1/10W	R442	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
R183	1-216-049-00	METAL CHIP	1K 5% 1/10W	R476	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R184	1-216-049-00	METAL CHIP	1K 5% 1/10W	R477	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R185	1-216-049-00	METAL CHIP	100K 5% 1/10W	R480	1-216-097-00	METAL CHIP	100K 5% 1/10W
R186	1-216-049-00	METAL CHIP	1K 5% 1/10W	R481	1-216-073-00	METAL CHIP	10K 5% 1/10W
R191	1-216-025-00	METAL CHIP	100 5% 1/10W	R482	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
				R483	1-216-073-00	METAL CHIP	10K 5% 1/10W
				R484	1-216-097-00	METAL CHIP	100K 5% 1/10W
				R485	1-216-041-00	METAL CHIP	470 5% 1/10W
				R486	1-216-041-00	METAL CHIP	470 5% 1/10W
				R487	1-216-097-00	METAL CHIP	100K 5% 1/10W

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
R488	1-216-067-00	METAL CHIP	5.6K 5% 1/10W	< DIODE >			
R491	1-216-073-00	METAL CHIP	10K 5% 1/10W	D901	8-719-046-83	DIODE RBV2506	
R492	1-216-073-00	METAL CHIP	10K 5% 1/10W	D902	8-719-200-82	DIODE 11ES2	
R493	1-216-073-00	METAL CHIP	10K 5% 1/10W	D903	8-719-200-82	DIODE 11ES2	
R494	1-216-073-00	METAL CHIP	10K 5% 1/10W	D904	8-719-200-82	DIODE 11ES2	
R497	1-216-049-00	METAL CHIP	1K 5% 1/10W	D905	8-719-200-82	DIODE 11ES2	
R498	1-216-049-00	METAL CHIP	1K 5% 1/10W	D906	8-719-200-82	DIODE 11ES2	
R499	1-216-094-00	METAL GLAZE	75K 5% 1/10W	D910	8-719-200-82	DIODE 11ES2	
R500	1-216-689-11	METAL CHIP	39K 0.5% 1/10W	D911	8-719-011-22	DIODE UZ-36BSB	
R501	1-216-094-00	METAL GLAZE	75K 5% 1/10W	D912	8-719-010-39	DIODE UZ-5.1BSC	
R502	1-216-689-11	METAL CHIP	39K 0.5% 1/10W	D913	8-719-200-82	DIODE 11ES2	
< VIBRATOR >				D914	8-719-200-82	DIODE 11ES2	
X301	1-579-125-11	VIBRATOR, CERAMIC (8MHz)		< FUSE >			
*****				△F901	1-532-215-00	TIME LAG FUSE T0. 8A 250V (AEP, UK, G)	
*	1-653-784-11	P.S. BOARD		△F901	1-576-104-11	FUSE 2A 250V (US, CND)	
*****				< TRANSISTOR >			
	1-533-293-11	FUSE HOLDER		Q901	8-729-118-01	TRANSISTOR 2SB1116	
	7-682-548-04	SCREW +BVT 3X8 (S)		< RESISTOR >			
< CAPACITOR >				R905	1-249-425-11	CARBON 4.7K 5% 1/4W F	
C901	1-109-848-11	ELECT	22000uF 20% 25V	R906	1-249-437-11	CARBON 47K 5% 1/4W	
C902	1-124-563-11	ELECT	2200uF 20% 25V	R907	1-247-807-11	CARBON 100 5% 1/4W	
C903	1-124-557-11	ELECT	1000uF 20% 25V	R908	1-247-807-11	CARBON 100 5% 1/4W	
C904	1-124-120-11	ELECT	220uF 20% 25V	R910	1-249-417-11	CARBON 1K 5% 1/4W	
C905	1-124-478-11	ELECT	100uF 20% 25V	*****			
C906	1-126-964-11	ELECT	10uF 20% 50V	*	1-653-780-11	SW BOARD	
C907	1-126-964-11	ELECT	10uF 20% 50V	*****			
C908	1-164-159-11	CERAMIC	0.1uF 50V	< DIODE >			
C909	1-124-478-11	ELECT	100uF 20% 25V	D702	8-719-045-89	DIODE SML16760CN-TP4 (READY/OPR)	
C910	1-124-478-11	ELECT	100uF 20% 25V	< RESISTOR >			
C911	1-136-165-00	FILM	0.1uF 5% 50V	R752	1-216-025-00	METAL CHIP 100 5% 1/10W	
C912	1-136-165-00	FILM	0.1uF 5% 50V	R753	1-216-029-00	METAL CHIP 150 5% 1/10W	
C913	1-136-165-00	FILM	0.1uF 5% 50V	R754	1-216-031-00	METAL CHIP 180 5% 1/10W	
C914	1-136-165-00	FILM	0.1uF 5% 50V	R755	1-216-033-00	METAL CHIP 220 5% 1/10W	
C915	1-136-165-00	FILM	0.1uF 5% 50V	R756	1-216-035-00	METAL CHIP 270 5% 1/10W	
C917	1-164-159-11	CERAMIC	0.1uF 50V	R757	1-216-039-00	METAL CHIP 390 5% 1/10W	
C918	1-124-910-11	ELECT	47uF 20% 50V	R758	1-216-041-00	METAL CHIP 470 5% 1/10W	
C919	1-124-910-11	ELECT	47uF 20% 50V	R759	1-216-045-00	METAL CHIP 680 5% 1/10W	
< CONNECTOR >				R760	1-216-047-00	METAL CHIP 820 5% 1/10W	
CN501	1-564-243-00	PIN, CONNECTOR 6P		R761	1-216-049-00	METAL CHIP 1K 5% 1/10W	
CN502	1-564-243-00	PIN, CONNECTOR 6P		R762	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
CN901	1-580-230-11	PIN, CONNECTOR (PC BOARD) 3P		R763	1-216-055-00	METAL CHIP 1.8K 5% 1/10W	
CN902	1-564-321-00	PIN, CONNECTOR 2P		R764	1-216-059-00	METAL CHIP 2.7K 5% 1/10W	
* CN903	1-564-915-11	PIN, CONNECTOR 7P		R765	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
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SW

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
		< SWITCH >					
S751	1-572-184-11	SWITCH, KEYBOARD (POWER)			3-759-251-21	MANUAL, INSTRUCTION (ENGLISH) (US)	
S752	1-572-184-11	SWITCH, KEYBOARD (INPUT)			3-759-251-31	MANUAL, INSTRUCTION (ENGLISH, FRENCH) (CND)	
S753	1-572-184-11	SWITCH, KEYBOARD (MUTING)		*	4-384-285-01	COVER, BATTERY (for RM-VA1)	
S754	1-572-184-11	SWITCH, KEYBOARD (MASTER VOL -)		*	4-968-908-01	INDIVIDUAL CARTON	
S755	1-572-184-11	SWITCH, KEYBOARD (MASTER VOL +)			4-968-909-01	CUSHION (UPPER)	
				*	4-968-910-01	CUSHION (LOWER)	
S756	1-572-184-11	SWITCH, KEYBOARD (DISPLAY)					*****
S757	1-572-184-11	SWITCH, KEYBOARD (STD LEVEL)					
S758	1-572-184-11	SWITCH, KEYBOARD (SUPER WOOFER MODE)				*****	
S759	1-572-184-11	SWITCH, KEYBOARD (SUPER WOOFER ON/OFF)				HARDWARE LIST	
S760	1-572-184-11	SWITCH, KEYBOARD (SURROUND)				*****	
S761	1-572-184-11	SWITCH, KEYBOARD (DOLBY PRO LOGIC ON/OFF)		#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 SLIT	
S762	1-572-184-11	SWITCH, KEYBOARD (DOLBY PRO LOGIC MODE)		#2	7-685-886-29	SCREW +BVTT 4X20	
		*****		#3	7-685-659-79	SCREW +BVTP 4X8 TYPE2 IT-3	
				#4	7-682-548-04	SCREW +BVTT 3X8 (S)	
				#5	7-682-560-04	SCREW +BVTT 4X6 (S)	
		MISCELLANEOUS		#6	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3	
		*****		#7	7-621-846-58	SCREW, WOOD +R 4.1X20	
102	1-765-690-11	WIRE (FLAT TYPE) (21 CORE)					
△CP101	1-575-651-21	CORD, POWER (AEP, G)					
△CP102	1-696-571-11	CORD, POWER (UK)					
△CP103	1-690-958-11	CORD, POWER (US, CND)					
△F901	1-532-215-00	TIME LAG FUSE T0. 8A 250V (AEP, UK, G)					
△F901	1-576-104-11	FUSE 2A 250V (US, CND)					
SP901	1-504-276-11	SPEAKER (5CM) (CENTER TWEETER)					
SP902	1-504-632-11	SPEAKER (10CM)					
		(FRONT FULL RANGE/CENTER WOOFER)					
SP903	1-504-631-11	SPEAKER (13CM) (SUPER WOOFER)					
SP904	1-504-276-11	SPEAKER (5CM) (CENTER TWEETER)					
SP905	1-504-632-11	SPEAKER (10CM)					
		(FRONT FULL RANGE/CENTER WOOFER)					
SP906	1-504-631-11	SPEAKER (13CM) (SUPER WOOFER)					
△T901	1-426-987-11	TRANSFORMER, POWER (US, CND)					
△T901	1-426-988-11	TRANSFORMER, POWER (AEP, G)					
△T901	1-426-989-11	TRANSFORMER, POWER (UK)					

		ACCESSORIES & PACKING MATERIALS					

		1-467-753-11	REMOTE COMMANDER (RM-VA1)				
		1-751-347-11	CORD, CONNECTION (REAR SPEAKER CABLE)				
			(10m)				
		1-751-474-21	CORD, CONNECTION (AUDIO CABLE) (1.5m)				
		1-765-505-11	CORD, CONNECTION				
			(FRONT L/R SPEAKER CABLE) (3.5m)				
		3-759-251-11	MANUAL, INSTRUCTION				
			(ENGLISH, FRENCH, SPANISH, PORTUGUESE,				
			GERMAN, DUTCH, SWEDISH, ITALIAN) (AEP, UK, G)				

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SA-VA1

SONY® SERVICE MANUAL

*US Model
Canadian Model
AEP Model
UK Model*

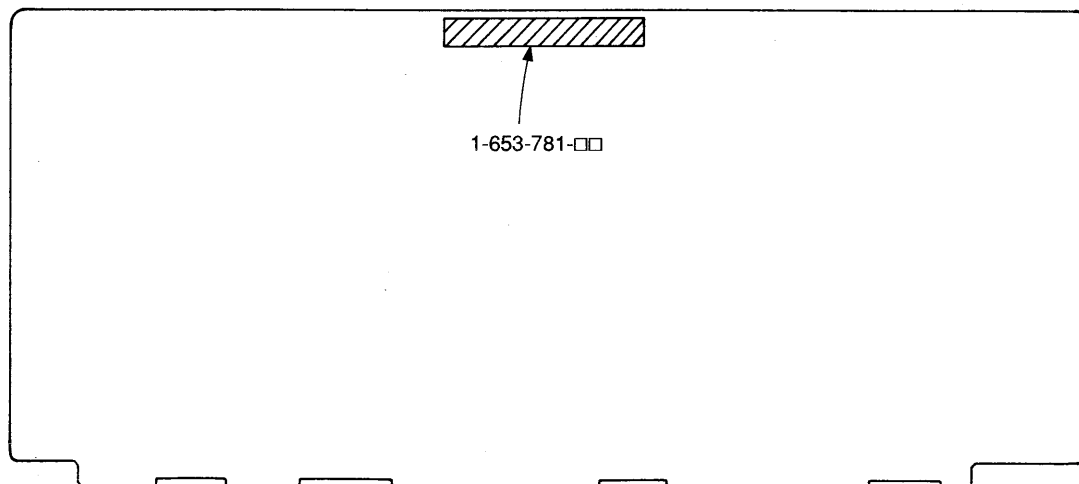
SUPPLEMENT-1

File this Supplement with the Service Manual.

**Subject : 1. COUNTERMEASURE board addition.
2. INPUT and FILTER board change.
3. BLOCK DIAGRAM CHANGE.**

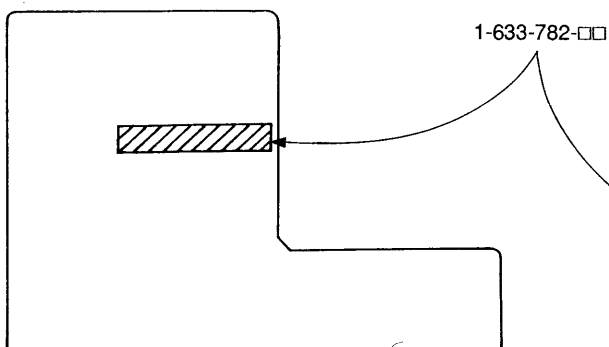
(ECN-TA403011, TA403102, TA403860)

Part No. Location :
[INPUT BOARD] (COMPONENT SIDE)



[FILTER BOARD] (COMPONENT SIDE)

Suffix No. 11, 12



Suffix No. 13

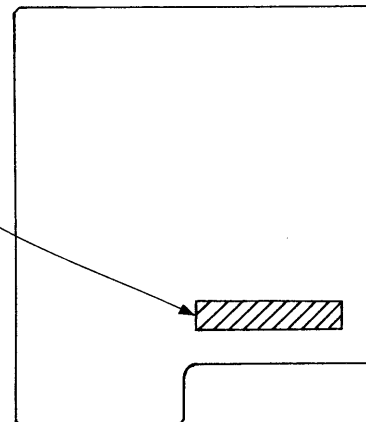


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SCHEMATIC DIAGRAM	
— Suffix No. 13 INPUT, FILTER SECTION —	11
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SERVICING NOTE

About interchange ability

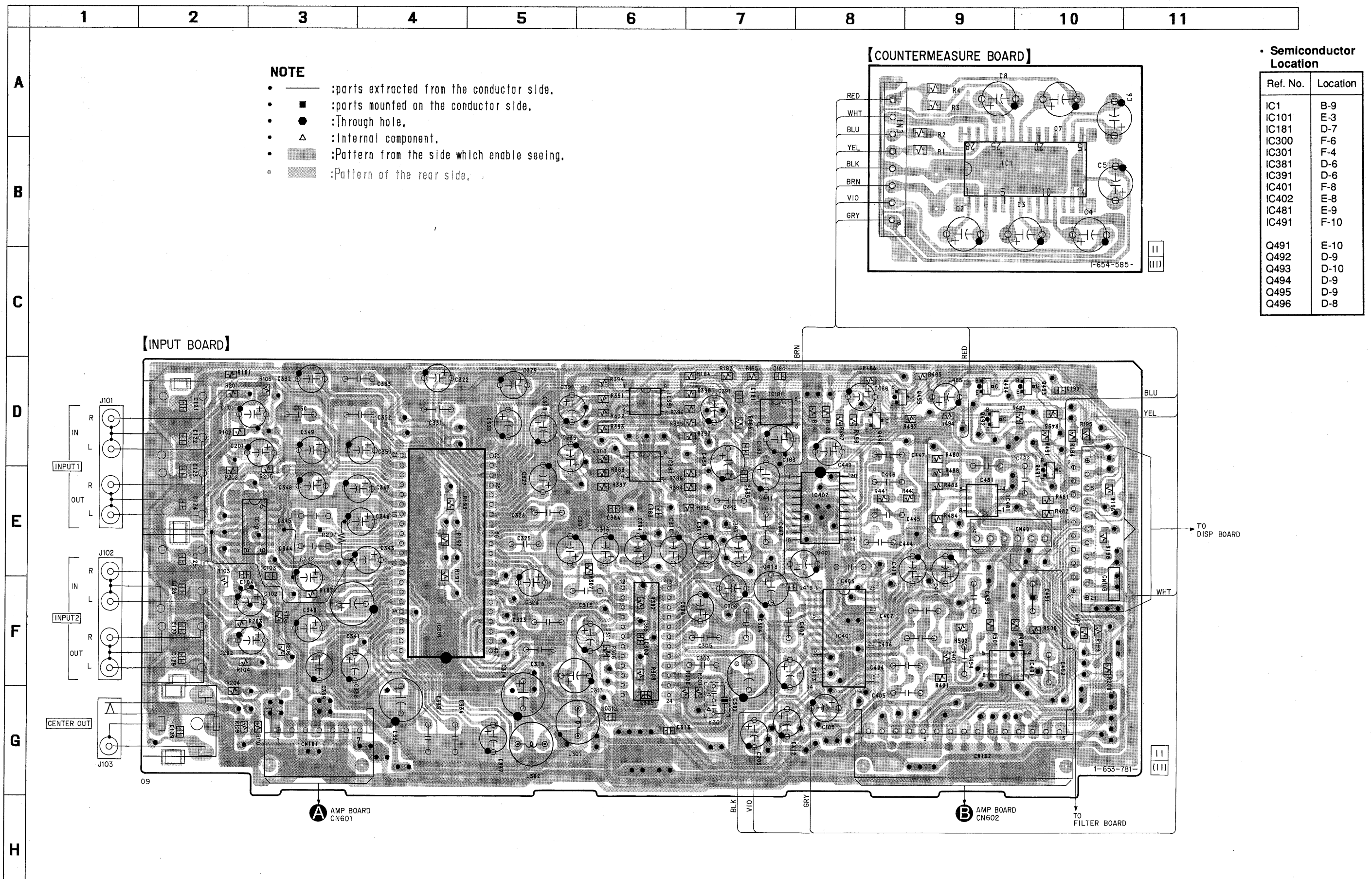
- Combination among "INPUT board", "FILTER board" and "COUNTERMEASURE board".

INPUT BOARD	FILTER Board		COUNTERMEASURE Board
	Suffix No. 11 , 12 1-653-782-11	Suffix No. 13 A-4377-396-A	
Suffix No. 11 , 12 A-4371-670-A (EXCEPT German MODEL) A-4371-713-A (German MODEL)	○	×	○
Suffix No. 13 A-4377-395-A	×	○	NOT USED

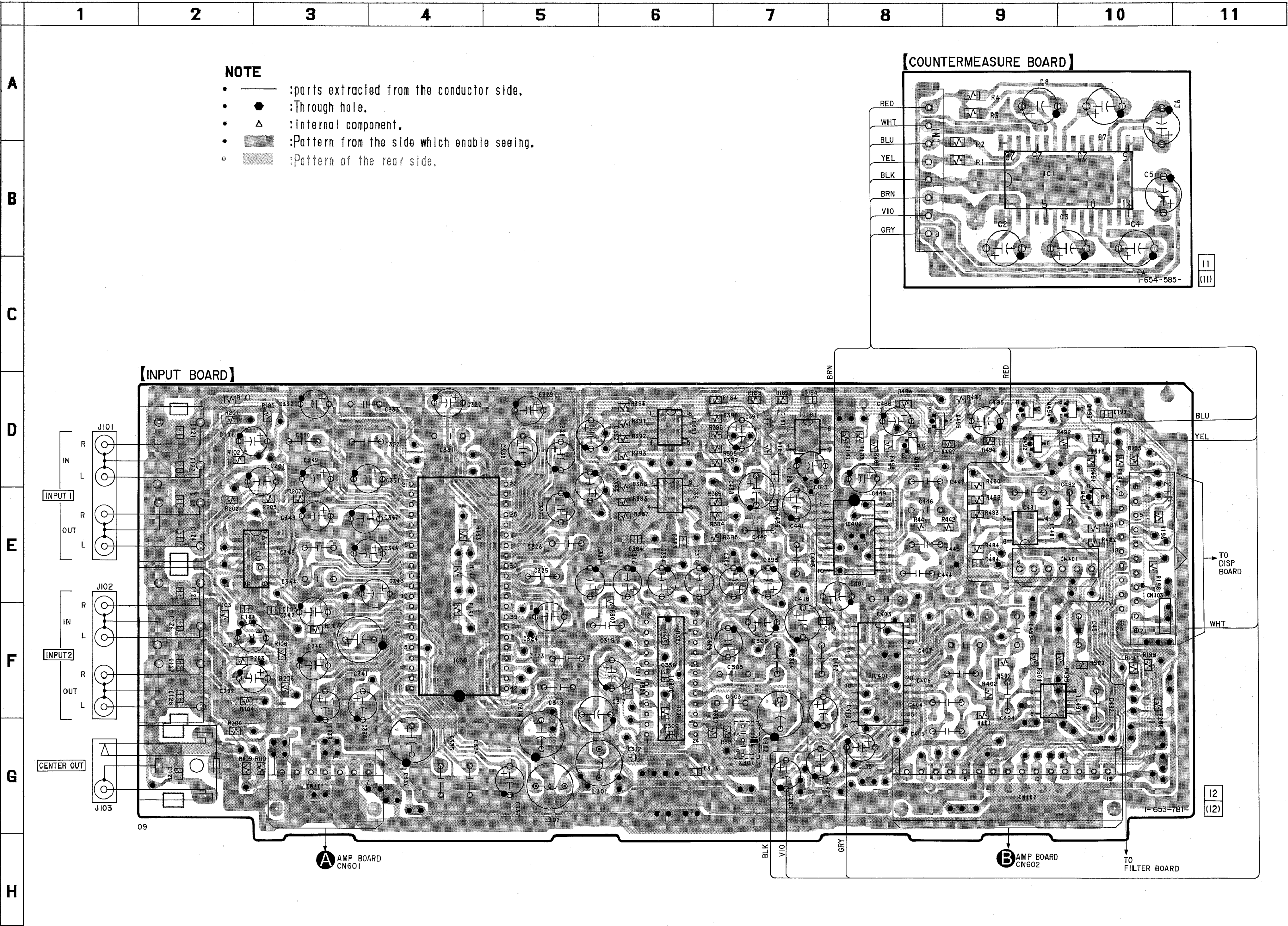
DIAGRAMS

PRINTED WIRING BOARD

— Suffix No. 11 INPUT, COUNTERMEASURE SECTION —



PRINTED WIRING BOARD
— Suffix No. 12 INPUT, COUNTERMEASURE SECTION —



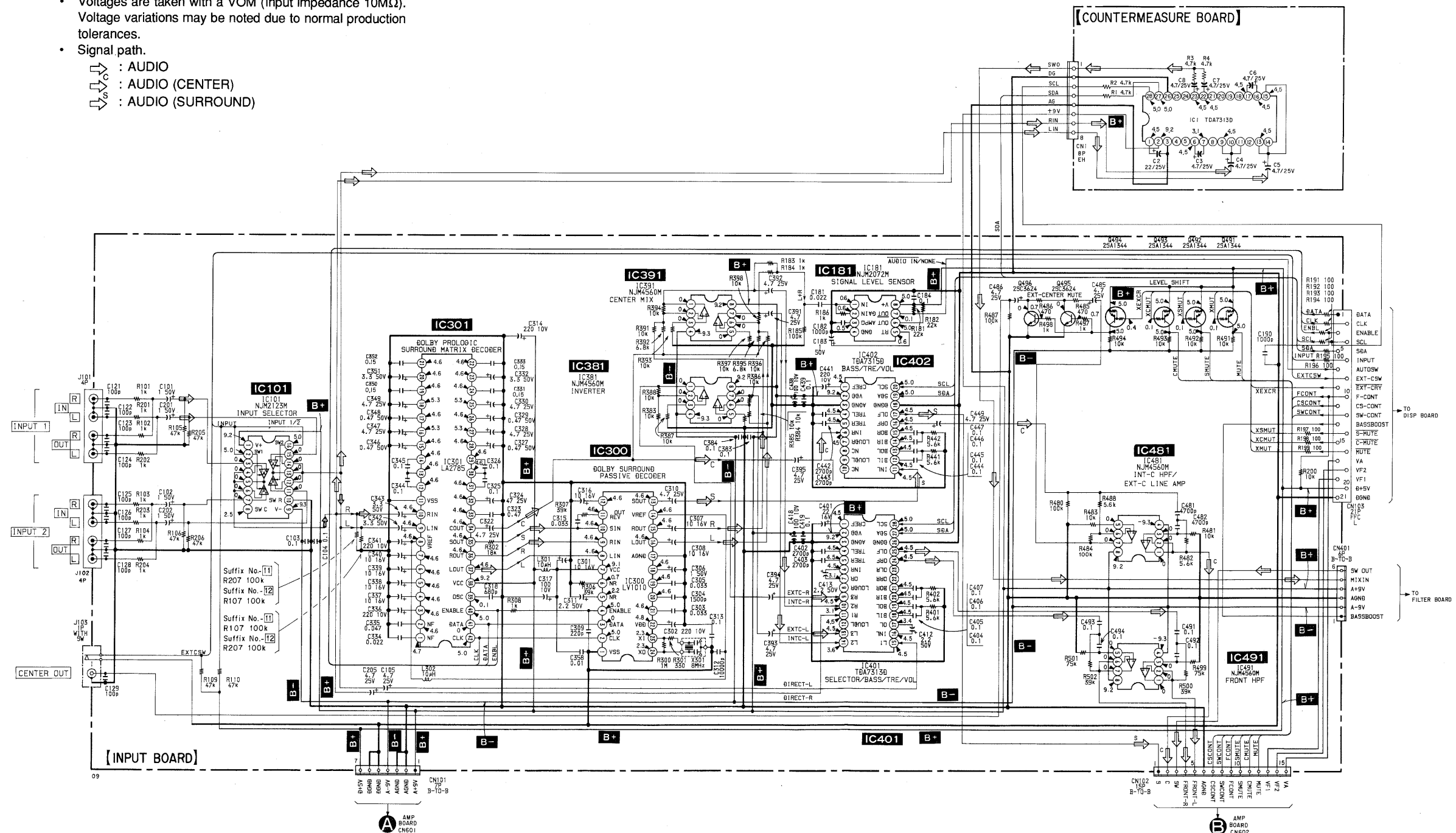
• Semiconductor Location

Ref. No.	Location
IC1	B-9
IC101	E-3
IC181	D-7
IC300	F-6
IC381	F-4
IC391	D-6
IC401	D-6
IC402	F-8
IC481	E-8
IC491	E-9
Q491	F-10
Q492	E-10
Q493	D-9
Q494	D-10
Q495	D-9
Q496	D-8

SCHEMATIC DIAGRAM
— Suffix No. 11, 12 INPUT, COUNTERMEASURE SECTION —

Note:

- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
- Δ : internal component.
- $\square$: panel designation.
- **B+** : B+ Line
- **B-** : B- Line
- Voltages are taken with a VOM (Input impedance $10\text{M}\Omega$). Voltage variations may be noted due to normal production tolerances.
- Signal path.
 - $\rightarrow$: AUDIO
 - $\rightarrow$: AUDIO (CENTER)
 - $\rightarrow$: AUDIO (SURROUND)



PRINTED WIRING BOARD
— Suffix No. 13 INPUT, FILTER SECTION —

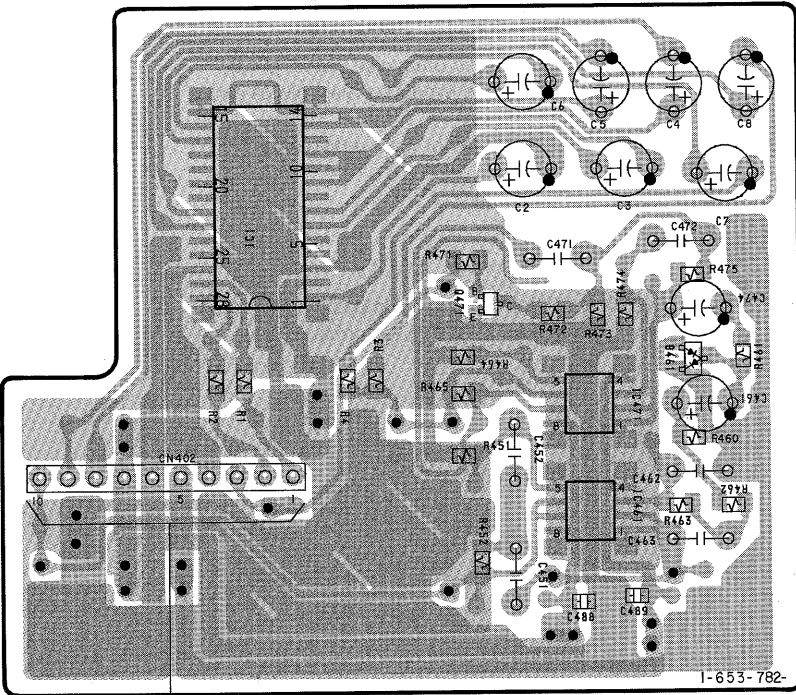
• Semiconductor Location

Ref. No.	Location
D461	B-10
IC1	B-8
IC101	F-3
IC181	D-7
IC300	G-6
IC301	F-4
IC381	E-6
IC391	D-6
IC401	G-8
IC402	E-8
IC481	E-9
IC491	G-10
Q471	B-9
Q491	E-10
Q492	E-9
Q493	D-10
Q494	D-9
Q495	E-9
Q496	E-8
Q497	E-8

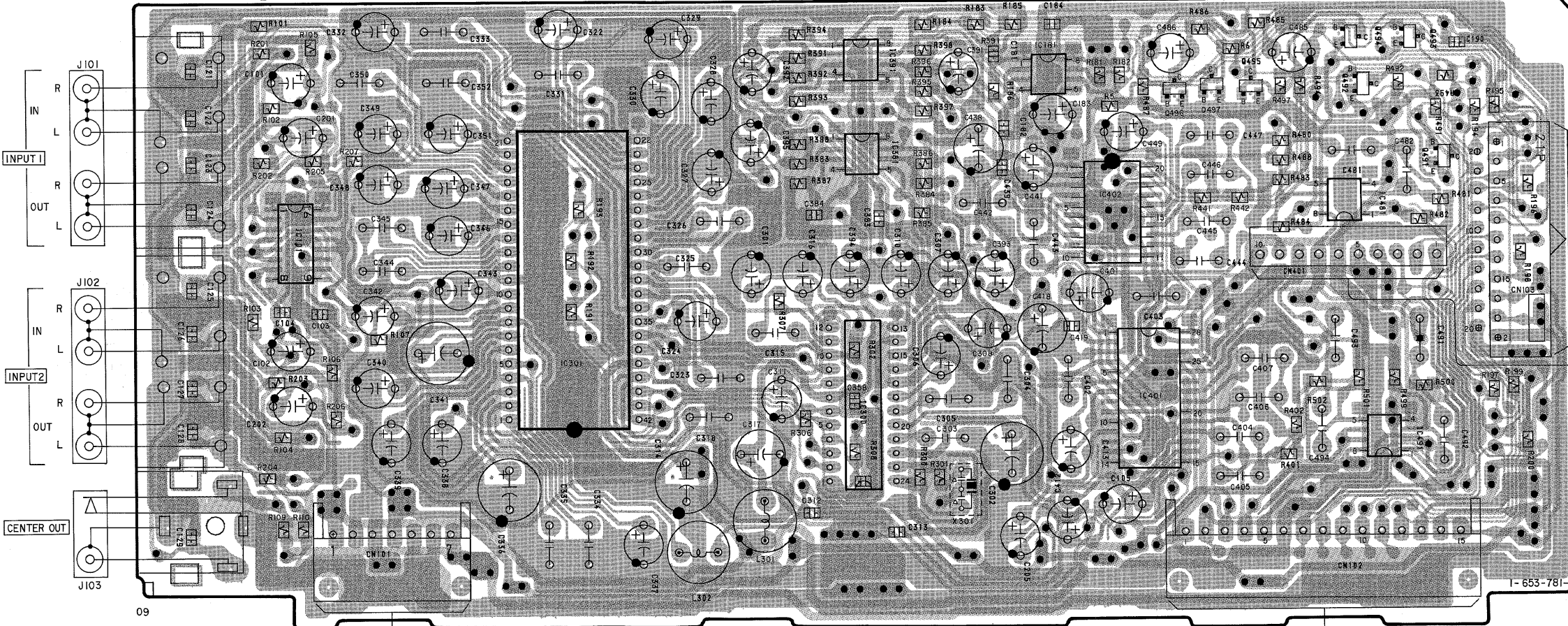
NOTE

- ● :Through hole.
- △ :internal component.
- [Pattern] :Pattern from the side which enable seeing.
- [Pattern] :Pattern of the rear side.

[FILTER BOARD]



[INPUT BOARD]



AMP BOARD
CN601

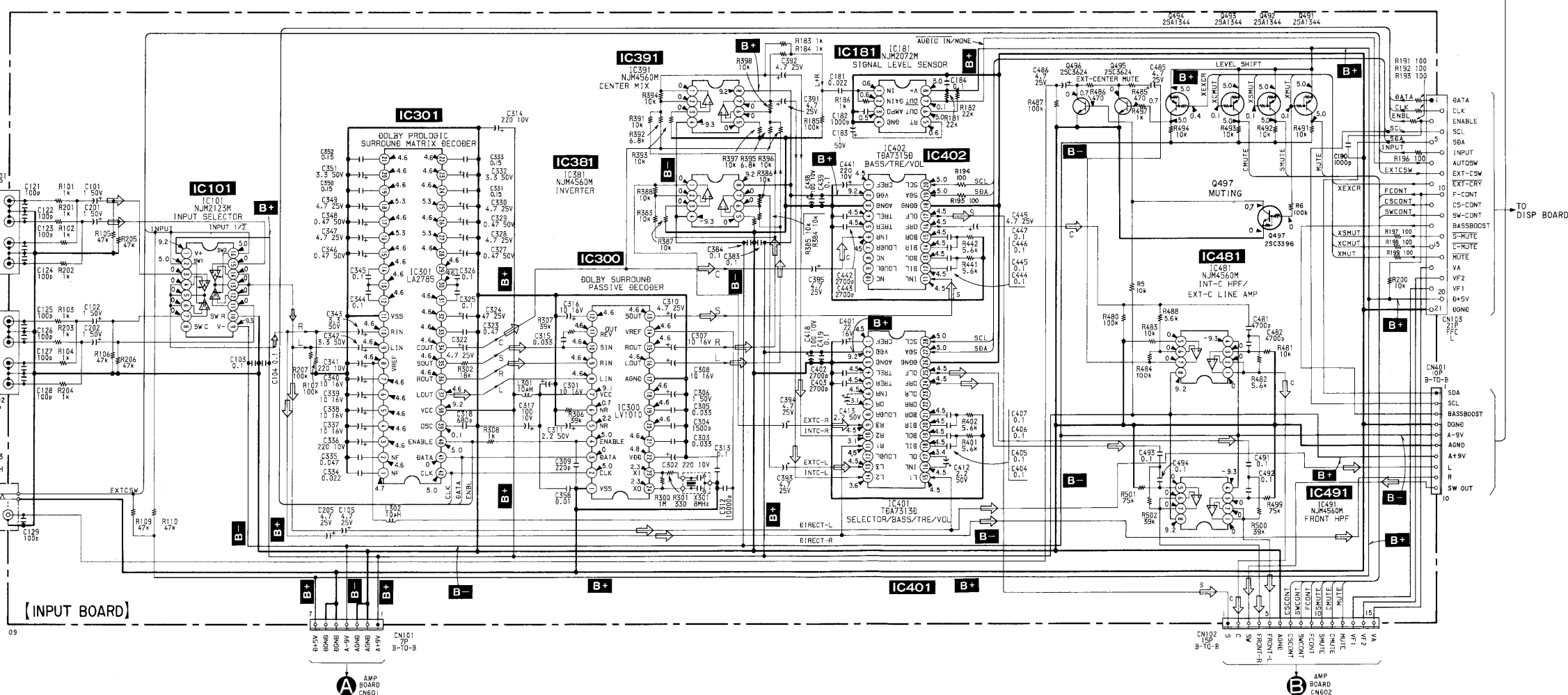
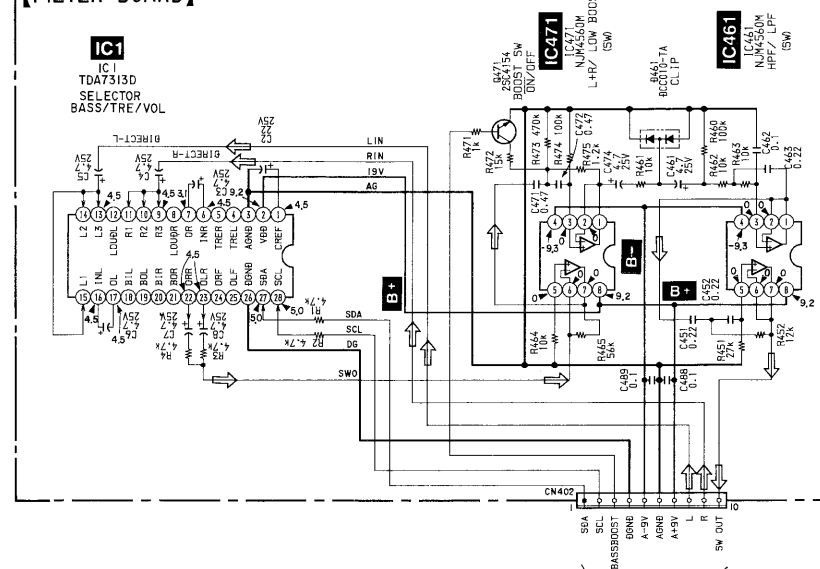
AMP BOARD
CN602

SCHEMATIC DIAGRAM
— Suffix No. 13 INPUT, FILTER SECTION —

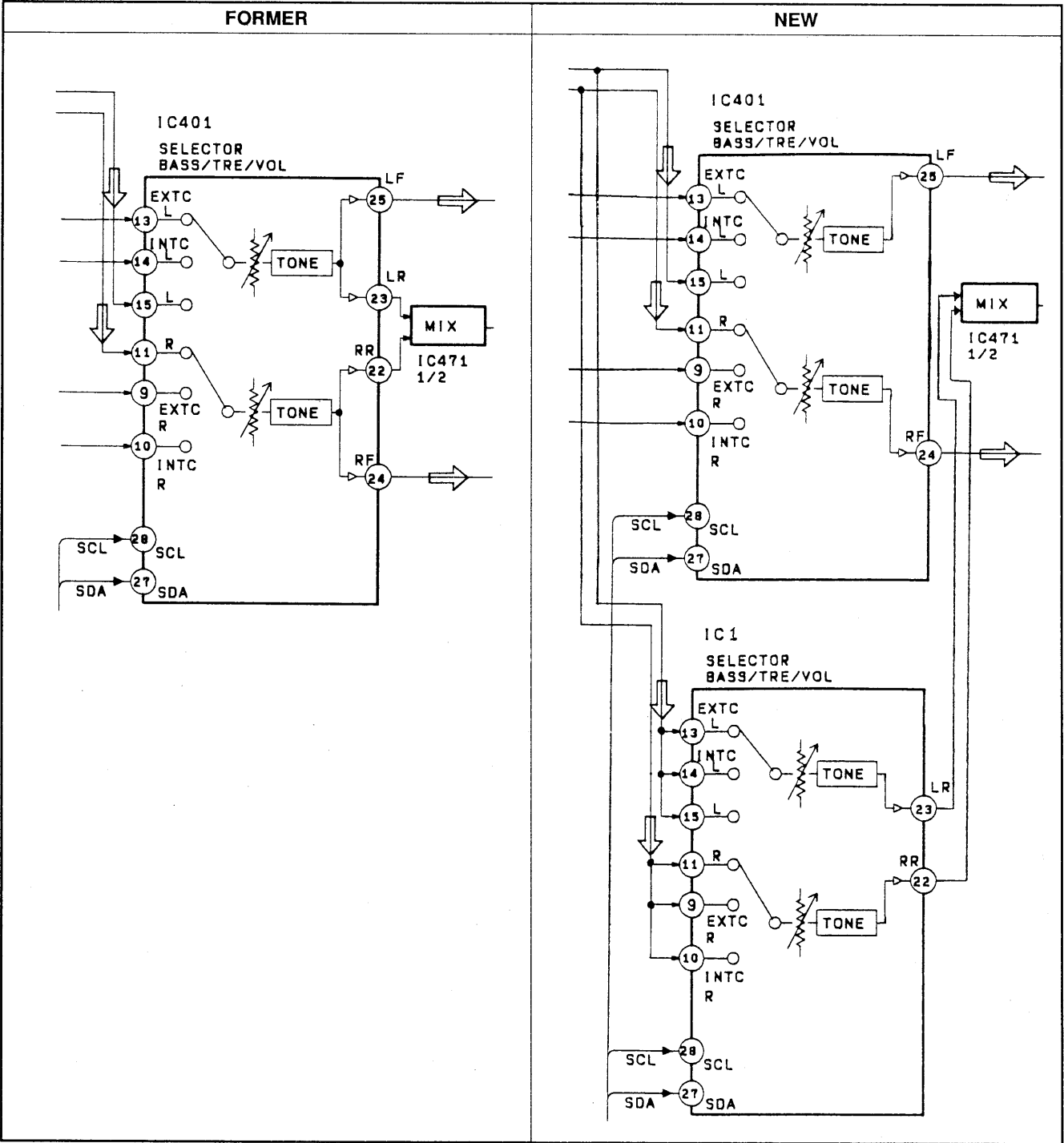
Note:

- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- Δ : internal component.
- $\square$: panel designation.
- B+** : B+ Line
- B-** : B- Line
- Voltages are taken with a VOM (Input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Signal path.
 - $\Rightarrow$: AUDIO
 - $\Rightarrow$: AUDIO (CENTER)
 - $\Rightarrow$: AUDIO (SURROUND)

[FILTER BOARD]



BLOCK DIAGRAM CHANGE
BLOCK DIAGRAM (Page 6, 7)



Suffix No. 11 12

COUNTERMEASURE

INPUT

ELECTRICAL PARTS LIST

COUNTERMEASURE BOARD ADDITION

Ref.No.	Part No.	Description	Remark
*	1-654-585-11	COUNTERMEASURE BOARD ***** (Suffix No. -11, -12)	
< CAPACITOR >			
C2	1-126-233-11	ELECT 22uF 20% 50V	
C3	1-124-927-11	ELECT 4.7uF 20% 100V	
C4	1-124-927-11	ELECT 4.7uF 20% 100V	
C5	1-124-927-11	ELECT 4.7uF 20% 100V	
C6	1-124-927-11	ELECT 4.7uF 20% 100V	
C7	1-124-927-11	ELECT 4.7uF 20% 100V	
C8	1-124-927-11	ELECT 4.7uF 20% 100V	
< CONNECTOR >			
CN1	1-564-511-11	PLUG, CONNECTOR 8P	
< IC >			
IC1	8-759-169-92	IC TDA7313D013TR	
< RESISTOR >			
R1	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R2	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R3	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R4	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	

INPUT BOARD CHANGE

Former			New			
			Suffix No. 11		Suffix No. 12	
Ref.No.	Part No.	Description	Part No.	Description	Part No.	Description
C410	1-124-927-11	ELECT 4.7uF 20% 100V	_____	_____	_____	_____
C411	1-124-927-11	ELECT 4.7uF 20% 100V	_____	_____	_____	_____
C441	1-126-233-11	ELECT 22uF 20% 50V	1-126-176-11	ELECT 220uF 20% 10V	1-126-176-11	ELECT 220uF 20% 10V
R207	1-249-441-11	CARBON 100K 5% 1/10W	1-249-441-11	CARBON 100K 5% 1/10W	1-216-097-00	METAL CHIP 100K 5% 1/10W
R476	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	_____	_____	_____	_____
R477	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	_____	_____	_____	_____

FILTER

INPUT

NOTE:

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some difference from the original one.

• RESISTORS

All resistors are in ohms
METAL: Metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable

• SEMICONDUCTORS

In each case, u: μ , for example:
uA...: μ A..., uPA...: μ PA..., uPB...: μ PB...,
uPC...: μ PC..., uPD...: μ PD...

• CAPACITORS

μ F: μ F

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	1-653-782-13	FILTER BOARD (Suffix No. -13) *****		R452	1-216-075-00	METAL CHIP 12K 5% 1/10W	
		< CAPACITOR >		R460	1-216-097-00	METAL CHIP 100K 5% 1/10W	
C2	1-126-233-11	ELECT 22uF 20% 50V		R461	1-216-073-00	METAL CHIP 10K 5% 1/10W	
C3	1-124-927-11	ELECT 4.7uF 20% 100V		R462	1-216-073-00	METAL CHIP 10K 5% 1/10W	
C4	1-124-927-11	ELECT 4.7uF 20% 100V		R463	1-216-073-00	METAL CHIP 10K 5% 1/10W	
C5	1-124-927-11	ELECT 4.7uF 20% 100V		R464	1-216-073-00	METAL CHIP 10K 5% 1/10W	
C6	1-124-927-11	ELECT 4.7uF 20% 100V		R465	1-216-091-00	METAL CHIP 56K 5% 1/10W	
C7	1-124-927-11	ELECT 4.7uF 20% 100V		R471	1-216-049-00	METAL CHIP 1K 5% 1/10W	
C8	1-124-927-11	ELECT 4.7uF 20% 100V		R472	1-216-077-00	METAL CHIP 15K 5% 1/10W	
C451	1-136-169-00	FILM 0.22uF 5% 50V		R473	1-216-113-00	METAL CHIP 470K 5% 1/10W	
C452	1-136-169-00	FILM 0.22uF 5% 50V		R474	1-216-097-00	METAL CHIP 100K 5% 1/10W	
C461	1-124-927-11	ELECT 4.7uF 20% 100V		R475	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
C462	1-136-165-00	FILM 0.1uF 5% 50V		*****			
C463	1-136-169-00	FILM 0.22uF 5% 50V		*	A-4377-395-A	INPUT BOARD, COMPLETE (Suffix No. -13) *****	
C471	1-136-173-00	FILM 0.47uF 5% 50V				< CAPACITOR >	
C472	1-136-173-00	FILM 0.47uF 5% 50V		C101	1-124-791-11	ELECT 1.0uF 20% 100V	
C474	1-124-927-11	ELECT 4.7uF 20% 100V		C102	1-124-791-11	ELECT 1.0uF 20% 100V	
C488	1-163-038-91	CERAMIC CHIP 0.1uF 25V		C103	1-163-038-91	CERAMIC CHIP 0.1uF 25V	
C489	1-163-038-91	CERAMIC CHIP 0.1uF 25V		C104	1-163-038-91	CERAMIC CHIP 0.1uF 25V	
		< CONNECTOR >		C105	1-124-927-11	ELECT 4.7uF 20% 100V	
CN402	1-508-693-00	CONNECTOR PIN 10P		C121	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
		< DIODE >		C122	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
D461	8-719-800-76	DIODE 1SS226		C123	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
		< IC >		C124	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
IC1	8-759-169-92	IC TDA7313D013TR		C125	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
IC461	8-759-745-64	IC NJM4560M		C126	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
IC471	8-759-745-64	IC NJM4560M		C127	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
		< TRANSISTOR >		C128	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
Q471	8-729-602-21	TRANSISTOR 2SC4154		C129	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
		< RESISTOR >		C181	1-163-033-91	CERAMIC CHIP 0.022uF 50V	
R1	1-216-065-00	METAL CHIP 4.7K 5% 1/10W		C182	1-163-141-00	CERAMIC CHIP 0.001uF 5% 50V	
R2	1-216-065-00	METAL CHIP 4.7K 5% 1/10W		C183	1-124-903-11	ELECT 1uF 20% 50V	
R3	1-216-065-00	METAL CHIP 4.7K 5% 1/10W		C184	1-163-038-91	CERAMIC CHIP 0.1uF 25V	
R4	1-216-065-00	METAL CHIP 4.7K 5% 1/10W		C190	1-163-141-00	CERAMIC CHIP 0.001uF 5% 50V	
R451	1-216-083-00	METAL CHIP 27K 5% 1/10W		C201	1-124-791-11	ELECT 1.0uF 20% 100V	
				C202	1-124-791-11	ELECT 1.0uF 20% 100V	
				C205	1-124-927-11	ELECT 4.7uF 20% 100V	
				C301	1-124-915-11	ELECT 10uF 20% 63V	
				C302	1-126-335-11	ELECT 220uF 20% 10V	
				C303	1-136-159-00	FILM 0.033uF 5% 50V	

INPUT

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
C304	1-130-473-00	MYLAR	0.0015uF 5% 50V	C392	1-124-927-11	ELECT	4.7uF 20% 100V
C305	1-136-159-00	FILM	0.033uF 5% 50V	C393	1-124-927-11	ELECT	4.7uF 20% 100V
C306	1-124-791-11	ELECT	1.0uF 20% 100V	C394	1-124-927-11	ELECT	4.7uF 20% 100V
C307	1-124-915-11	ELECT	10uF 20% 63V	C395	1-124-927-11	ELECT	4.7uF 20% 100V
C308	1-124-915-11	ELECT	10uF 20% 63V	C401	1-126-233-11	ELECT	22uF 20% 50V
C309	1-163-125-00	CERAMIC CHIP	220PF 5% 50V	C402	1-130-476-00	MYLAR	0.0027uF 5% 50V
C310	1-124-927-11	ELECT	4.7uF 20% 100V	C403	1-130-476-00	MYLAR	0.0027uF 5% 50V
C311	1-124-925-11	ELECT	2.2uF 20% 100V	C404	1-136-165-00	FILM	0.1uF 5% 50V
C312	1-164-232-11	CERAMIC CHIP	0.01uF 50V	C405	1-136-165-00	FILM	0.1uF 5% 50V
C313	1-163-038-91	CERAMIC CHIP	0.1uF 25V	C406	1-136-165-00	FILM	0.1uF 5% 50V
C314	1-126-335-11	ELECT	220uF 20% 10V	C407	1-136-165-00	FILM	0.1uF 5% 50V
C315	1-136-159-00	FILM	0.033uF 5% 50V	C412	1-124-925-11	ELECT	2.2uF 20% 100V
C316	1-124-915-11	ELECT	10uF 20% 63V	C413	1-124-925-11	ELECT	2.2uF 20% 100V
C317	1-126-101-11	ELECT	100uF 20% 16V	C418	1-126-101-11	ELECT	100uF 20% 16V
C318	1-130-469-00	MYLAR	680PF 5% 50V	C419	1-163-038-91	CERAMIC CHIP	0.1uF 25V
C322	1-124-927-11	ELECT	4.7uF 20% 100V	C438	1-126-101-11	ELECT	100uF 20% 16V
C323	1-136-173-00	FILM	0.47uF 5% 50V	C439	1-163-038-91	CERAMIC CHIP	0.1uF 25V
C324	1-124-910-11	ELECT	47uF 20% 50V	C441	1-126-176-11	ELECT	220uF 20% 10V
C325	1-136-165-00	FILM	0.1uF 5% 50V	C442	1-130-476-00	MYLAR	0.0027uF 5% 50V
C326	1-136-165-00	FILM	0.1uF 5% 50V	C443	1-130-476-00	MYLAR	0.0027uF 5% 50V
C327	1-126-772-11	ELECT	0.47uF 20% 50V	C444	1-136-165-00	FILM	0.1uF 5% 50V
C328	1-124-927-11	ELECT	4.7uF 20% 100V	C445	1-136-165-00	FILM	0.1uF 5% 50V
C329	1-126-772-11	ELECT	0.47uF 20% 50V	C446	1-136-165-00	FILM	0.1uF 5% 50V
C330	1-124-927-11	ELECT	4.7uF 20% 100V	C447	1-136-165-00	FILM	0.1uF 5% 50V
C331	1-136-167-00	FILM	0.15uF 5% 50V	C449	1-124-927-11	ELECT	4.7uF 20% 100V
C332	1-126-111-11	ELECT	3.3uF 20% 50V	C481	1-130-479-00	MYLAR	0.0047uF 5% 50V
C333	1-136-167-00	FILM	0.15uF 5% 50V	C482	1-130-479-00	MYLAR	0.0047uF 5% 50V
C334	1-136-157-00	FILM	0.022uF 5% 50V	C485	1-124-927-11	ELECT	4.7uF 20% 100V
C335	1-136-161-00	FILM	0.047uF 5% 50V	C486	1-124-927-11	ELECT	4.7uF 20% 100V
C336	1-126-335-11	ELECT	220uF 20% 10V	C491	1-136-165-00	FILM	0.1uF 5% 50V
C337	1-124-915-11	ELECT	10uF 20% 63V	C492	1-136-165-00	FILM	0.1uF 5% 50V
C338	1-124-915-11	ELECT	10uF 20% 63V	C493	1-136-165-00	FILM	0.1uF 5% 50V
C339	1-124-915-11	ELECT	10uF 20% 63V	C494	1-136-165-00	FILM	0.1uF 5% 50V
C340	1-124-915-11	ELECT	10uF 20% 63V				
C341	1-126-335-11	ELECT	220uF 20% 10V			< CONNECTOR >	
C342	1-126-111-11	ELECT	3.3uF 20% 50V	* CN101	1-569-502-11	PIN, CONNECTOR 7P	
C343	1-126-111-11	ELECT	3.3uF 20% 50V	CN102	1-573-109-11	PIN, CONNECTOR 15P	
C344	1-136-165-00	FILM	0.1uF 5% 50V	* CN103	1-568-864-11	SOCKET, CONNECTOR 21P	
C345	1-136-165-00	FILM	0.1uF 5% 50V	* CN401	1-569-795-11	HOUSING, CONNECTOR 10P	
C346	1-126-772-11	ELECT	0.47uF 20% 50V			< IC >	
C347	1-124-927-11	ELECT	4.7uF 20% 100V	IC101	8-759-287-76	IC NJM2123M	
C348	1-126-772-11	ELECT	0.47uF 20% 50V	IC181	8-759-701-51	IC NJM2072M	
C349	1-124-927-11	ELECT	4.7uF 20% 100V	IC300	8-759-168-98	IC LV1010N	
C350	1-136-167-00	FILM	0.15uF 5% 50V	IC301	8-759-248-74	IC LA2785	
C351	1-126-111-11	ELECT	3.3uF 20% 50V	IC381	8-759-745-64	IC NJM4560M	
C352	1-136-167-00	FILM	0.15uF 5% 50V	IC391	8-759-745-64	IC NJM4560M	
C358	1-164-232-11	CERAMIC CHIP	0.01uF 50V	IC401	8-759-169-92	IC TDA7313D013TR	
C383	1-163-038-91	CERAMIC CHIP	0.1uF 25V	IC402	8-759-273-12	IC TDA7315D013TR	
C384	1-163-038-91	CERAMIC CHIP	0.1uF 25V	IC481	8-759-745-64	IC NJM4560M	
C391	1-124-927-11	ELECT	4.7uF 20% 100V	IC491	8-759-745-64	IC NJM4560M	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< JACK >				R204	1-216-049-00	METAL CHIP	1K 5% 1/10W
J101	1-766-851-11	JACK, PIN 4P (INPUT 1)		R205	1-216-089-00	METAL CHIP	47K 5% 1/10W
J102	1-766-851-11	JACK, PIN 4P (INPUT 2)		R206	1-216-089-00	METAL CHIP	47K 5% 1/10W
J103	1-766-580-11	PIN, JACK (CENTER OUT)		R207	1-216-097-00	METAL CHIP	100K 5% 1/10W
< COIL >				R300	1-216-121-00	METAL CHIP	1M 5% 1/10W
L301	1-410-470-11	INDUCTOR	10uH	R301	1-216-037-00	METAL CHIP	330 5% 1/10W
L302	1-410-470-11	INDUCTOR	10uH	R302	1-216-079-00	METAL CHIP	18K 5% 1/10W
< TRANSISTOR >				R306	1-216-689-11	METAL CHIP	39K 0.5% 1/10W
Q491	8-729-805-65	TRANSISTOR	2SA1344	R307	1-216-689-11	METAL CHIP	39K 0.5% 1/10W
Q492	8-729-805-65	TRANSISTOR	2SA1344	R308	1-216-049-00	METAL CHIP	1K 5% 1/10W
Q493	8-729-805-65	TRANSISTOR	2SA1344	R383	1-216-073-00	METAL CHIP	10K 5% 1/10W
Q494	8-729-805-65	TRANSISTOR	2SA1344	R384	1-216-073-00	METAL CHIP	10K 5% 1/10W
Q495	8-729-107-43	TRANSISTOR	2SC3624-L18	R385	1-216-073-00	METAL CHIP	10K 5% 1/10W
Q496	8-729-107-43	TRANSISTOR	2SC3624-L18	R386	1-216-073-00	METAL CHIP	10K 5% 1/10W
Q497	8-729-805-43	TRANSISTOR	2SC3396	R387	1-216-073-00	METAL CHIP	10K 5% 1/10W
< RESISTOR >				R388	1-216-073-00	METAL CHIP	10K 5% 1/10W
R5	1-216-073-00	METAL CHIP	10K 5% 1/10W	R391	1-216-073-00	METAL CHIP	10K 5% 1/10W
R6	1-216-097-00	METAL CHIP	100K 5% 1/10W	R392	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
R101	1-216-049-00	METAL CHIP	1K 5% 1/10W	R393	1-216-073-00	METAL CHIP	10K 5% 1/10W
R102	1-216-049-00	METAL CHIP	1K 5% 1/10W	R394	1-216-073-00	METAL CHIP	10K 5% 1/10W
R103	1-216-049-00	METAL CHIP	1K 5% 1/10W	R395	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
R104	1-216-049-00	METAL CHIP	1K 5% 1/10W	R396	1-216-073-00	METAL CHIP	10K 5% 1/10W
R105	1-216-089-00	METAL CHIP	47K 5% 1/10W	R397	1-216-073-00	METAL CHIP	10K 5% 1/10W
R106	1-216-089-00	METAL CHIP	47K 5% 1/10W	R398	1-216-073-00	METAL CHIP	10K 5% 1/10W
R107	1-216-097-00	METAL CHIP	100K 5% 1/10W	R401	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
R109	1-216-089-00	METAL CHIP	47K 5% 1/10W	R402	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
R110	1-216-089-00	METAL CHIP	47K 5% 1/10W	R441	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
R181	1-216-081-00	METAL CHIP	22K 5% 1/10W	R442	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
R182	1-216-081-00	METAL CHIP	22K 5% 1/10W	R480	1-216-097-00	METAL CHIP	100K 5% 1/10W
R183	1-216-049-00	METAL CHIP	1K 5% 1/10W	R481	1-216-073-00	METAL CHIP	10K 5% 1/10W
R184	1-216-049-00	METAL CHIP	1K 5% 1/10W	R482	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
R185	1-216-097-00	METAL CHIP	100K 5% 1/10W	R483	1-216-073-00	METAL CHIP	10K 5% 1/10W
R186	1-216-049-00	METAL CHIP	1K 5% 1/10W	R484	1-216-097-00	METAL CHIP	100K 5% 1/10W
R191	1-216-025-00	METAL CHIP	100 5% 1/10W	R485	1-216-041-00	METAL CHIP	470 5% 1/10W
R192	1-216-025-00	METAL CHIP	100 5% 1/10W	R486	1-216-041-00	METAL CHIP	470 5% 1/10W
R193	1-216-025-00	METAL CHIP	100 5% 1/10W	R487	1-216-097-00	METAL CHIP	100K 5% 1/10W
R194	1-216-025-00	METAL CHIP	100 5% 1/10W	R488	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
R195	1-216-025-00	METAL CHIP	100 5% 1/10W	R491	1-216-073-00	METAL CHIP	10K 5% 1/10W
R196	1-216-025-00	METAL CHIP	100 5% 1/10W	R492	1-216-073-00	METAL CHIP	10K 5% 1/10W
R197	1-216-025-00	METAL CHIP	100 5% 1/10W	R493	1-216-073-00	METAL CHIP	10K 5% 1/10W
R198	1-216-025-00	METAL CHIP	100 5% 1/10W	R494	1-216-073-00	METAL CHIP	10K 5% 1/10W
R199	1-216-025-00	METAL CHIP	100 5% 1/10W	R497	1-216-049-00	METAL CHIP	1K 5% 1/10W
R200	1-216-073-00	METAL CHIP	10K 5% 1/10W	R499	1-216-094-00	METAL GLAZE	75K 5% 1/10W
R201	1-216-049-00	METAL CHIP	1K 5% 1/10W	R500	1-216-689-11	METAL CHIP	39K 0.5% 1/10W
R202	1-216-049-00	METAL CHIP	1K 5% 1/10W	R501	1-216-094-00	METAL GLAZE	75K 5% 1/10W
R203	1-216-049-00	METAL CHIP	1K 5% 1/10W	R502	1-216-689-11	METAL CHIP	39K 0.5% 1/10W
< VIBRATOR >				X301	1-579-125-11	VIBRATOR, CERAMIC	
